The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1333.—Vol. XXXI. LONDON, SATURDAY, MARCH 9, 1861. {STAMPED.....SIXPENCE. {UNSTAMPED..FIVEPENCE.

The Mining Exchange.

NOTICE.—An OFFICIAL printed LIST is PUBLISHED DAILY at the MINING EXCHANGE, by order of the Committee, containing business done and closing prices of Mining Shares, up to 3 o'clock; on Saturdays up to 1 o'clock. The List can be had at £2 2s. per annum; if by post, £3 3s., payable in advance; or 3d. per copy, post included, on application to Mr. W. E. Johnson, clerk, Mining Exchange, London, E.C.

Pursers and secretaries of Mines are respectfully requested to send accounts, notices, and reports of meeting, &c., to the above, where they will be posted for the convenience of members.—London, March 8, 1861. 1

MR. JAMES CROFTS, SHAREBROKER, No. 1, FINCH LANE, CORNHILL (established 16 years), begs to intimate that he BUYS and SELLS every description of BRITISH and FOREIGN STOCKS and SHARES, particularly BRITISH MINING SHARES, on which dividends are regularly paid realising from 15 to 20 per cent. per annum.

The improvements in the market predicted a few weeks since are now matter of fact, particularly dividend stocks.

WEEKLY LIST of SHARES RECOMMENDED for IMMEDIATE PURCHASE, and sure for profits:—

Prosper United.	Michell.	Wheal Norris.
Bottle Hill.	Herward United.	Wheal Ludcott.
Wheal Moyle.	Scorrier Consols.	Bryntall.
Tincroft.	East Caradon.	East Budnick and Mount.
	Great Retallack.	West Wendron.

Mr. Crofts has business to transact in all the above mines. 2

MR. JAMES LANE. No. 44, THREADNEEDLE STREET, LONDON, E.C.

James Lane has FOR SALE, at nett prices:—10 Alfred Consols, £3¼; 25 Bottle Hill, 26s.; 10 Clitters, £2½; 50 Calstock Consols, 11s. 6d.; 10 East Caradon, £15¾; 20 East Devon, 32s. 6d.; 50 Cornubia, 15s.; 20 Great Retallack, 38s. 6d.; 20 Great Crinnis; 10 Wheal Grylls, £5½; 20 Great Wheal Martha, 19s.; 1 Grambler and St. Aubyn, £21; 20 Great North Tolgus, 21s. 6d.; 20 Harriett, 38s.; 20 Ludcott, £3 15s.; 20 Lady Bertha, 21s.; 2 Margaret, £50; 20 New Treleigh, 48s.; 20 North Downs, £4⅛; 100 North Exmouth, 21s.; 5 North Treskerby, £30⅛; 30 Redmoor, 5s.; 20 Penhale Moor, £4⅛; 20 South Condurrow, 14s.; 3 Trelawny, £13¾; 40 Sigford Consols, 11s.; 10 Marke Valley, £6¼; Sortridge Consols, 12s. 6d.; 50 Orsedd, 26s.; 2 Wendron Consols £21¾; 50 New Clifford, 6s.; 10 Hingston Down, £2½; 10 Gonamena, £2¾; 10 North Basset, £7¼; 100 Mary Emma, 6s. 6d.; 30 West Par, 4s.; 15 Boscundle, 25s.; 20 Crowlwm, 10s.; 30 Cefn Cilcen, 17s.; 50 Crookhaven; 1 Pant-y-Pydew; 20 Wheal Edward, £2¼; 100 Worthing, 18s. 3

JAMES B. BRENCHLEY, 78, OLD BROAD STREET, LONDON, E.C., TRANSACTS BUSINESS in the leading DIVIDEND and PROGRESSIVE MINES.

Buyers are solicited to apply for the market selling price before purchasing at hazard of some of those who advertise shares for sale; for, with one or two honourable exceptions, such shares cannot be obtained unless the market price has greatly receded; and it is needless further to point out the loss and disadvantages that ensue to a purchaser.

J. B. Brenchley will pay immediate cash for all stock he may buy, and he declines to transact business for time, unless a pre-payment of a part of the amount be made.

SHARES WANTED in Botallack, Basset, Wheal Seton, Trelyon Consols, North Treskerby, Carn Brea, New Seton, South Frances.

Bankers: London and Westminster. 4

PETER WATSON, ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES,
78, OLD BROAD STREET, LONDON, E.C. 5

Orders to Buy or Sell Mine Shares by letter or telegraph punctually attended to.

MR. LELEAN, STOCK AND SHAREDEALER, 4, CUSHION COURT, OLD BROAD STREET, LONDON, E.C. 6

MR. E. GOMPERS, MINING OFFICES, 3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C. BUSINESS TRANSACTED in BRITISH and FOREIGN STOCKS and SHARES. Terms, 1¼ per cent.

Mr. Gompers has FOR SALE the following shares, free of commission:—

50 Wheal Crebor.	20 East Caradon.	20 Sortridge, 12s. 6d.
2 North Treskerby.	20 Hingston Down.	20 Wheal Edward.
20 Wheal Harriett, £17⅜.	20 North Minera, 40s.	

Mr. Gompers is also a BUYER of the undermentioned:— 50 North Robert.

100 or 200 Tregullow, £8.	20 Drake Walls.	50 North Exmouth, 17s 6d
60 Wheal Norris, 24s.	3 Stray Park, £36½.	20 South Condurrow.

Bankers: London and Westminster Bank 7

MR. GEORGE BATTERS, 5, COWPER'S COURT, BIRCHIN LANE, DEALER IN BRITISH MINING SHARES AND OTHER STOCKS.

Mr. Batters, from long experience and intimate acquaintance with all Mining Stocks, can advise as to investment of capital, at the closest market prices, and has made a selection from the mines of North Wales likely to be largely profitable in respect of dividends, and with great prospects of advance in market value. Full particulars from personal inspection can be had on application.

Mr. Batters is a BUYER or SELLER in Bryn Gwiog, Herward, West Bryn Gwiog, Brynford, North Minera, Billins, and Silver Rake, &c., at close market prices; and is a BUYER of any number of West Bryn Gwiog shares at £31⅛ per share; 50 North Minera, 37s. 6d.; 50 New North Minera, 17s. prem.; 100 Great Martha, 18s.; 5 Billins, £21; and 2 Silver Rake. FOR SALE 2 Billins, £22.

Mr. Batters has returned from North Wales, and will be happy to communicate any information he may possess to his correspondents. 8

MR. J. HUME, of 74, OLD BROAD STREET, LONDON, E.C., transacts business for clients at a commission of 1¼ per cent.

Mr. Hume has substantial reasons for expecting a great advance in each and all of the following mines during this and the ensuing two months:—East Carn Brea, Wheal Seton, Great Retallack, North Basset, East Caradon, and Wheal Crebor.

Mr. Hume will deem it a pleasure to attend to any applications for particulars or details of the above, or of any other investment of an equally sound character, and will supply the closest dealing prices of the same.

The "Mining Share Monitor," for March just out. Price 6d. free by post.

Bankers: London Joint-Stock Bank. 9

MR. GEORGE BUDGE, 4, ROYAL EXCHANGE-BUILDINGS, LONDON, has FOR SALE:—100 Drake Walls, 19s.; 3 Trelyon Consols, £14; 100 Bensathwood, 12s. 6d.; 50 Charlotte United, 19s. 6d.; 5 Collacombe, £6; 100 Great Caradon; 100 East Providence, 25s.; 100 Great Retallack, 36s. 9d.; 25 North Downs, 3l. 16s. 9d.; 25 North Buller; 25 Nangiles; 40 Millpool, 25s.; 50 Lady Bertha, 22s.; 50 Kelly Bray, £1¼; 100 Great Wheal Martha, 20s.; 15 Great South Tolgus, £8; 20 North Busy; 100 North Minera, £2; 3 Providence, £42; 5 Silver Rake, £19 18s.; 5 [illegible]th Treskerby, £31; 5 South Bryn Gwiog, £26¼; 100 South Condurrow; 100 Tees [illegible]e; 40 Crane; 26 Wheal Nelson, 4s.; 100 Wheal Harriett; 50 Merilyn, 25s.; 100 [illegible]orthing, 17s. 9d.; 5 Stray Park, £39; 25 Wheal Lewis; 2 Wheal Buller, £125; 100 [illegible]heal Arthur; 50 Central Mines; 100 Dale; 25 Rosewarne Consols; 100 Great North [illegible]olgus; 20 Treloweth, £4⅛; 5 West Bryn Gwiog, £32; 2 West Caradon, £81½; 20 East Russell, £6½; 2 East Basset, £100; 100 Wheal Crebor, 14s. 9d.; 100 Treweatha, 19s. 3d.; 5 Old Tolgus; 25 Buller and Basset; 10 Alfred Consols, £3½; 2 Carn Brea, £99; 50 Carnewas; 100 Gernick; 100 New Wheal Frances; 3 Trelawny, £14; 100 Vale of Towy, 9s. 6d.; 50 Wheal Edward. 10

FIFTEEN to TWENTY, and even TWENTY-FIVE PER CENT. PER ANNUM upon current value of shares, in CORNISH TIN and COPPER MINES.

Dividends payable two-monthly or quarterly.

MESSRS. TREDINNICK AND CO., MINING ENGINEERS, SEND their SELECTED LIST OF SOUND PROGRESSIVE AND DIVIDEND SHARES upon the receipt of a Fee of One Guinea.

Review of Cornish and Devon Mining Enterprise, 5s. per copy.

Maps per post of the Buller and Basset, Great Vor, Alfred Consols, the Providence and Margaret Districts, 2s. 6d. each.

Cornish Mines, well selected, pay better than any other description of securities, are freer from risks, and entail less responsibilities than banks and other joint-stock companies. Shares bought and sold on commission of 2½ per cent.

Money advanced at 10 per cent. annually, for short or long periods, upon approved Mining Shares.—78, Lombard-street, London, E.C 11

SECURE INVESTMENTS.—Capitalists will find British Mines pay the largest profit of all known securities. To invest £1000 in Consols, railway debentures, or bank shares, the largest amount receivable is £60 per annum, whereas the former yields an income of at least £150. Progressive Mines, judiciously selected, frequently advance from 100 to 500 per cent., and free from risk.

Messrs. FULLER AND CO., 8, MOORGATE STREET, LONDON, are in daily communication with agents of the principal mines in the kingdom, and are in a position to advise as to the merits of each class of property.

BANKS, RAILWAYS, INSURANCE, and every description of Stock Exchange business transacted. Telegraph messages promptly attended to.

A few SHARES FOR SALE in Dolcoath United and West South Caradon. 12

THE MIDLAND IRON COMPANY, ROTHERHAM, MANUFACTURERS of BEST "YORKSHIRE," and of STEEL IRON TYRE BARS, for LOCOMOTIVE ENGINE, CARRIAGE, and WAGON WHEELS. Also of REFINED, SCRAP, STEEL IRON and "YORKSHIRE" BARS, HOOPS, RAILS, ANGLE IRON, MALLEABLE SHAFTS, AXLES and FORGINGS. 13

GEORGE MOORE, 1, CROWN COURT, THREADNEEDLE STREET.

George Moore will SELL the following SHARES, or any part, to-day, at quoted prices, FREE OF ANY COMMISSION:—

25 Marke Valley, £6⅜.	1 Bryn Gwiog, £32¾.	20 Pedn-an-drea, 9s. 9d.
1 South Frances, £182½.	20 East Rosewarne, 30s. 9d.	20 South Darren (Limited & Welch), offer wanted.
1 Wh. Kitty (Lit.), £12⅞	25 East Grenville, 13s. 9d.	5 Stray Park, £38¼.
20 Wh. Ludcott, £3 13s 9d	25 Great Retallack, 37s 6d.	5 Trencrom, offer wanted.
2 North Roskear, £22½.	10 Nant. & Penrhiw, 35s.	13 Wh. Edward, £2 6s. 3d.
50 North Minera, 39s. 9d.	1 West Frances, £167⅜.	25 Bottle Hill, 24s. 9d.
2 North Treskerby, £31⅛	20 Wheal Harriett, 36s. 9d.	

FOR SALE, for immediate cash:—1 West Seton, 1 Wh. Clifford, 35 Prosper United.

PURCHASERS of undoubted respectability can register transfers and receive CERTIFICATES of same previous to PAYMENT.

In any business that George Moore is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER. 16

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—

10 Alfred Cons., £3 3s 9d.	5 Hings. Down, £2 1s 6d.	1 South Caradon, £312½
10 Anglo Mexican Mint, £13 10s.	1 Herodsfoot, £35¾.	2 Spearne Moor.
3 Brynford Hall, £25⅛.	1 Kitty (Lelant), £12⅞.	1 St. Ives Consols, £39⅛
5 Bryn Gwiog, £32 18s 9d.	5 Kitty (St. Agnes), 24s 6d	30 Sortridge Cons., 11s. 9d
5 Bedford Utd., £5 6s. 9d.	20 Lady Bertha, 21s.	20 St. Day United, 13s. 9d.
20 Bottle Hill, 25s.	20 Kelly Bray.	5 S. Bryn Gwiog, £23¾.
5 Bryntall, £4 6s. 9d.	50 Lady Eliza, 8s. 3d.	20 So. Condurrow, 13s. 9d.
20 Beneathwood, 9s. 9d.	20 Lewis, 8s 9d. (including last call of 26s.)	3 South Basset, £163¾.
5 Billins.	5 Marke Valley, £6¼.	1 South Frances, £182½
20 Buller and Bertha.	1 Mary Ann, £193¾.	5 Silver Rake.
1 Carn Brea, £97½.	50 Michell.	30 Tamar Con., £2 4s. 6d.
5 Cobre, £40¾.	10 North Frances, £4½.	10 Tincroft, £5 18s. 9d.
20 Cefn Cilcen, 12s. 9d.	50 North Minera (10s paid) 31s.	10 Treloweth, £3¾.
20 Calstock Cons., 12s.	20 North Minera (20s. pd.)	10 Tolvadden, £2⅞.
20 Central Minera, 22s. 9d.	25 North Exmouth, 20s 6d.	100 Tretoil, 5s.
10 Camborne Vean, £3⅛.	20 Nant-y-Iago, 20s. 9d.	3 Trelawny, £13¾.
1 Cargoll, £17½.	2 North Roskear, £21.	2 Trelyon Con., £13 3s 9d
50 Cath. and Jane, 3s. 6d.	5 North Crofty, £7 10s.	20 Treweatha, 14s. 9d.
2 Cwm Erfin, £20.	10 No. Basset, £7 8s. 9d.	5 Trencrom.
10 Cumb. Blk. Ld., 58s 9d.	1 New Seton, £47½.	50 Vale of Towy, 8s. 3d.
1 Dev. Gt. Con., £362½.	20 New Frances, 11s. 9d.	1 W. Caradon, £80⅜.
50 Dale, 13s. 9d.	2 North Treskerby, £30.	50 West So. Caradon.
2 Ding Dong, £11¾.	10 No. Downs, £3 18s. 9d.	5 W. Stray Park, £5.
5 E. Caradon, £15 13s 3d.	20 New Treleigh, £2 7s 6d.	20 Wheal Unity, 12s. 9d.
10 East Russell, £6 8s 9d.	50 North Rhine, 8s. 3d.	1 West Seton, £352¼.
5 East Carn Brea, £7¼.	5 Old Tolgus United.	1 Wheal Clifford, £177½
20 East Budnick, 10s. 3d.	20 Prosper United, 28s. 9d.	20 Wheal Crebor, 12s. 9d.
1 East Basset, £98¾.	1 Providence, £39⅞.	25 Wh. Trevelyan, 17s 6d.
20 East Grenville, 14s. 9d.	50 Port Phillip, 14s. 6d.	50 Worthing, 18s.
20 East Rosewarne, 34s 3d.	10 Pendeen, £5 3s. 9d.	1 Wend. Con., £20 18s 9d
20 East Alfred, 20s. 9d.	20 Pachuca.	20 Wh. Grenv., £2 16s 9d
20 East Kongsburg, 19s 6d.	20 Pedn-an-drea.	5 Wh. Ludcott, £3 15s 9d.
1 Grambler, £21¾.	30 Redmoor, 4s. 9d.	10 Wheal Wrey.
20 Great Alfred, 19s. 3d.	10 Rosewarne and Herland, 9s. 6d.	10 Wheal Harriett, 36s 9d.
20 Guriyn, 5s. 6d.	1 Rosewarne United.	20 Wheal Moyle.
10 Gonamena, £2 17s. 3d.	10 Rosewall Hill & Ransom, £2 1s. 3d.	5 Wheal Uny, £3⅝.
20 Great Retallack, 37s 3d.	10 Saint John dei Ray, £30 17s. 6d.	1 Wheal Margaret, £47.
50 Gt. Wh. Martha, 18s 9d (fully paid up).	50 South Lady Bertha.	5 W. Bryn Gwiog, £31¾
3 Great Wheal Fortune, £10¼.	5 So. Carn Brea, £3 8s 9d.	10 Wheal Hearle.
20 Great Wh. Vor, 34s. 9d.	1 Stray Park, £38 3s. 9d.	20 West Wendron, 12s. 6d.
20 Great Crinnis.		1 Wheal Seton, £87½.
1 Herward, £21.		3 Wh. Damsel, £15¾.
		10 Wheal Edward.
		50 Wheal Nelson.
		20 West Margaret, 14s 9d.

Mr. Herron recommends a purchase of shares in the following progressive mines at present prices, viz.:—North Minera, Wheal Damsel, Dale, West South Caradon, and West Bryn Gwiog.—2, Adam's-court, Old Broad-street, March 8, 1861. 13

MESSRS. VIVIAN AND REYNOLDS, 68, OLD BROAD STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS of MINES, COMMISSION, and GENERAL AGENTS for the PURCHASE or SALE of MINE SHARES, RAILWAY, and EVERY OTHER DESCRIPTION of STOCK.

Commission on share transactions, 1¼ per cent. on £100 and above, and 2½ per cent. for less sums. 14

MR. C. POWELL, MINE SHAREBROKER, 2, SPREAD EAGLE COURT, FINCH LANE, LONDON, E.C.

C. Powell informs his friends and the public that the situation of his office (adjoining the Mining Exchange) enables him to act promptly on all orders confided to him, either by post or telegraph; and begs to assure those who may favour him with business on commission, or at nett prices, that his best endeavours shall be used for their interest.

Office hours: 10 till 5. Commission, 1¼ per cent.

March 8, 1861. Bankers: City Bank, Finch-lane. 17

EDWARD COOKE, 5, HERCULES PASSAGE, THREADNEEDLE STREET, solicits a continuance of the patronage of the public, and assures them that he is in a position to do business on commission, or nett prices, in any of the mines usually dealt in on the most favourable terms with regard to their interests. All orders entrusted to his care will have prompt attention.

March 8, 1861. Bankers: London and Westminster, Lothbury, 18

MR. THOMAS SPARGO, SHAREBROKER, 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C. Commission, 2½ per cent. 19

RICHARD CLIFT, MINE SHAREDEALER, late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all letters are to be addressed. 20

JOHN GLEDHILL AND CO., MINE AGENTS AND SHAREBROKERS, MINING OFFICES, CORN EXCHANGE, LEEDS. 21

EDWARD BROOK, MINING BROKER, 11, BENSON'S BUILDINGS, LEEDS. 22

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., has FOR SALE:—

Bedford United, £5⅛.	Lady Bertha, £1¼.	Sigford Consols, 12s. 6d.
Bedford Consols, 7s. 9d.	Merilyn, 19s. 6d.	South Betsy, 26s. 3d.
East Caradon, £15⅞.	North Treskerby, £32.	Wheal Arthur, 4s. 9d.
East Russell, £6 11s. 3d.	No. Wh. Exmouth, 22s 6d	Wheal Edward, £2 6s 3d.
East Carn Brea, £8⅛.	No. Wh. Trelawny, 8s 6d	Wheal Harriett, 37s.
Gawton United, 7s. 6d.	Pelyn Wood, 4s.	Wheal Norris, 25s.
Hingston Down, £2 3s 9d	Stray Park, £38¼.	Wheal Moyle, 32s. 6d.
Kelly Bray, £1¼.	Sortridge, 12s. 3d.	Wheal Crebor, 13s.

And is a BUYER of any number of—

Bedford Consols.	Great Wheal Martha.	Wheal Edward.
Gawton United.	North Wheal Robert.	Wheal Moyle.

An OFFER WANTED for 200 Tregullow Consols, for 25th June. 23

T. Rosewarne recommends the following shares for immediate purchase:—Gawton United, North Wh. Robert, North Trelawny, Wh. Edward, Wh. Arthur, Wh. Moyle.

March 8, 1861. Bankers: Bank of London.

MR JOSEPH GREGORY, MINING OFFICES, 1, BANK CHAMBERS, LOTHBURY, E.C. BUSINESS TRANSACTED in BRITISH and FOREIGN STOCKS and SHARES. Terms, 1¼ per cent. on £100 and above, 2½ per cent. on smaller sums. Bankers: City Bank, Threadneedle-street. 24

MR. R. H. M. JACKMAN, 2, ADAM'S COURT, OLD BROAD STREET, CITY, E.C., offers the undermentioned shares at the prices quoted, free of commission:—

45 West So. Caradon, 18s.	15 Calstock Cons., 15s.	21 Ludcott, £3 16s. 3d.
25 Merilyn, 17s.	20 Michell, 9s. 3d.	30 Lewis, 8s.
30 East Budnick, 11s.	15 Edward, £2 3s. 9d.	40 Wrey, 13s.
25 So. Condurrow, 12s.	10 Rosewall Hill, £2.	10 Great Caradon, 10s.
1 North Roskear, £21¼.	15 Camborne Vean, £3 1s.	1 Rosewarne, £22.
60 Unity, 13s. 9d.	20 Charlotte, 20s.	110 Beneathwood, 9s. 6d.

March 8, 1861. Bankers: London and Westminster. 25

MESSRS. R. HORLEY AND CO., SWORN STOCK, SHARE, and MINING BROKERS, 45, CORNHILL, E.C. (late of 2, Royal Exchange-buildings), continue to TRANSACT EVERY DESCRIPTION OF MINING BUSINESS, and are in a position to obtain reliable information respecting all dividend and progressive mines.

N.B.—Messrs. Horley and Co. publish a Weekly Mining List, with the closing prices, every Wednesday, and will be most happy to forward the same (gratis) on application. 26

MR. MURCHISON'S REVIEW OF BRITISH MINING FOR THE QUARTER AND THE YEAR ENDING 31st DEC., 1860, is NOW READY.

Price One Shilling. At 117, Bishopsgate-street Within, London, E.C. 27

MR. T. P. THOMAS, MINING AGENT AND AUCTIONEER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON. 28

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHARE DEALER, 11, DALE STREET, LIVERPOOL. 29

JOHN R. PIKE, GENERAL SHAREDEALER, 3, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C. 30

FREDERICK WILLIAM MANSELL, MINING OFFICES, 1, HATTON COURT, THREADNEEDLE STREET, LONDON, E.C. Bankers: London Joint-Stock Bank. 31

CHARLES LEE AND CO., MINE SHAREDEALERS AND BROKERS, CHESTER.

SHARES ON SALE in the several following mines, in North Wales, viz.:—South Pant-y-Gof, Kilmorey, South Kilmorey, and others.—Apply at the office, 20, Newgate-street, Chester. N.B.—Mines inspected, and impartial reports given. 32

MESSRS. THOMAS PENROSE and THOMAS PRICE UNDERTAKE ASSAYS and ANALYSES of EVERY DESCRIPTION of MINERAL PRODUCT, FUEL, and MANURES, at Messrs. Richardson and Co.'s Assay Office and Laboratory, Copper Ore Wharves, Swansea. 33

LONDON MINE AGENCY (Established 1848).

REMOVAL.—Mr. PEET'S MINE AGENCY is REMOVED to 62, MOORGATE STREET, LONDON, where information may be had upon all mines, British or foreign.

Office of reference to mines. Reports furnished from competent and confidential agents. Loans upon shares, and stocks purchased or sold on the usual commission.

Note.—A few gentlemen may now join in the purchase of a mine, with great chances of a successful return for small outlay.

Mr. Peet calls attention to the Silver Bank Mines, as a valuable property, and will furnish particulars on application. These shares will soon be at a high premium upon the merits of the mines, tested by sales of ore.

62, Moorgate-street, London, February, 1861. 34

NOTICE.—J. SYKES, SHAREBROKER, LEEK, wishes to call the attention of capitalists to the Dale Mine at the present price, as being a speculation free from risk, and one of the cheapest shares on the market.

FOR SALE:—50 Dale, at 14s. 6d.; and 2 Cumberland Black Lead (fully paid), £3¼.

WANTED, for cash:—10 Wheal Grenville, 5 Wheal Harriett, 10 Crebor, 20 East Budnick and Mount, 10 North Robert, and 50 Dale at 13s. 6d. 35

INVESTMENTS FOR CAPITAL.

HENRY GOULD SHARP, SHAREDEALER, 32, POULTRY, LONDON, E.C., RECOMMENDS the PURCHASE of SHARES in the FOLLOWING MINES, at present market prices:—

DIVIDEND MINES.

Botallack.	South Frances.	West Wheal Seton.
Carn Brea.	Tincroft.	Wheal Basset.
Herodsfoot.	West Caradon.	Wheal Buller.

MINES WITH DIVIDENDS IN ABEYANCE.

Ding Dong.	North Roskear.	Wheal Seton.
East Pool.	Rosewarne United.	Wheal Trelawny.

PROGRESSIVE MINES.

Bryn Gwiog.	East Carn Brea.	Wheal Hearle.
Cook's Kitchen.	Nangiles.	Wheal Union.
Crane.	North Treskerby.	Wheal Uny.
Devon Union (Limited).	South Carn Brea.	Worvas Downs.

SHARES FOR SALE:—100 Lady Eliza, an offer wanted. 36

TO MINING CAPITALISTS.—Those inclined to invest in an unusually cheap and safe property may have full particulars on application to "S.," 14, Union-street, Plymouth. 37

OLD TOLGUS MINE.—TEN SHARES FOR SALE, at £10 per share. Also, FIFTY SHARES in BULLER AND BASSET UNITED, at 21s. per share.—Apply to "G. R.," *Mining Journal* office, 26, Fleet-street, London, E.C. 38

WHEAL HEARLE.—FIVE SHARES FOR SALE, at £12¾. Apply to "F. S. G.," care of Mr. Everett, news agent, 75, Old Broad-street, London, E.C. 39

WANTED, TEN to TWENTY SHARES in WHEAL HEARLE MINE, at £12 per share.—Apply to "L. M.," *Mining Journal* office, 26, Fleet-street, London, E.C. 40

WANTED, GENTLEMEN CALLING at COLLIERIES, MINES, and IRONWORKS, to BECOME AGENTS for the SALE of PATENT and OTHER MACHINERY EXTENSIVELY REQUIRED. A liberal commission allowed.—Apply to "N. O. E.," *Mining Journal* office, 26, Fleet-street, E.C. 41

WANTED, a SITUATION as UNDERGROUND MANAGER, having had considerable experience in the North of England and Wales. Can survey and plan, &c. Satisfactory references can be given.—Address, "Graig," Post-office, Mountain Ash, Glamorganshire. 42

WANTED, a good SECOND HAND STEAM ENGINE, from 60 to 70 inch cylinder, with or without boilers. Also, a STEAM WINDING ENGINE, with not less than a 6 or 7 ton boiler. If a crusher attached to the same the better.—Apply, with lowest cash prices, to Mr. A. Bennett, Marazion. 43

FOR SALE, a FIRST CLASS PAIR of NEW HORIZONTAL HIGH PRESSURE STEAM ENGINES, complete. Cylinders 25 in. bore and 4 ft. stroke, wrought-iron cranks and wrought-iron shaft, 12 in. diameter.—Address, J. and W. Leigh, Patricroft, Manchester. 44

HAMMETT CONSOLS MINE.—Notice is hereby given to MERCHANTS and others NOT to SUPPLY GOODS or GIVE CREDIT to any party without first applying to the undersigned.

HANCOCK AND SHARP, Solicitors for a Shareholder,

Dated this 8th of March, 1861. 20, Tokenhouse-yard, London. 45

DEVON GREAT WHEAL ELLEN MINING COMPANY (LIMITED).

Incorporated under the Joint-Stock Companies Acts.

District of Ashburton, Devon.

The PROSPECTUS of this company WILL SHORTLY BE ISSUED.

See Report in this week's Journal. 46

WHEATLEY KIRK AND CO., GENERAL ENGINEERS, MACHINISTS, TOOL MAKERS, &c., of MANCHESTER, continue to supply any class of machinery for home and exportation, with the utmost facility. Their catalogue is sent by post (free) on application. 47

WHEATLEY KIRK AND CO. CALL ESPECIAL ATTENTION to their STOCKS, TAPS, and DIES. WHITWORTH STANDARDS of various sizes in cases.—Manchester, March, 1861. 48

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of Prof. DEVILLE'S METHOD of PRODUCING PURE ALUMINIUM, they are now in a POSITION to SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860. 49

ROBERT FRAZER AND SONS, DEALERS in LUMP and GROUND MANGANESE of EVERY DESCRIPTION.

WORKS,—FILLING SHORE, GATESHEAD-ON-TYNE.

OFFICE,—39, SANDHILL, NEWCASTLE-ON-TYNE. 50

TO COAL OWNERS AND COKE BURNERS.

MACKWORTH'S PATENT COAL WASHER, OR PURIFIER.—This MACHINE will EXTRACT the SHALE and ALL HEAVY IMPURITIES from SMALL COAL at a COST of TWOPENCE PER TON.—For particulars and references, apply to the makers, A. and T. Fry, Temple-gate Works, Bristol; or to Mr. Jos. Rider, Basinghall-street, Leeds. 51

CHARLES DAVEY AND CO., SAFETY FUSE MANUFACTURERS, ST. HELEN'S JUNCTION, LANCASHIRE. 52

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL. | OXIDE OF COBALT. [WIRE, &c.
REFINED METALLIC BISMUTH. | GERMAN SILVER—IN INGOTS, SHEET

NICKEL AND COBALT ORES PURCHASED. 53

Original Correspondence.

IRON MANUFACTURE—THE HOT-BLAST.

SIR,—I have been much struck by the recent perusal of some observations on the hot-blast, contained in Mr. William Truran's valuable work, entitled "The Iron Manufacture of Great Britain;" and, though it may seem rather late to criticise a work published in 1855, I cannot refrain from calling attention to some paragraphs which, I think, are calculated to give wrong impressions on this important subject, urging only in excuse for the tardiness of my remarks, that it was not till very lately that I had the opportunity of reading carefully the observations alluded to. I have less hesitancy, also, in writing what will follow, as I do not intend to criticise, but merely discuss, and in setting forth my own ideas, do so more in a suggestive than an argumentative spirit. My professional studies, pursued at a foreign institution, had taught me to look upon the advantages of the hot-blast so much as a matter of course, in general, that I was surprised to see them called into question in the work I allude to, for though Mr. Truran does (in a measure tacitly) admit its superiority over the cold-blast, he still writes like a man convinced against his will, and battles the ground manfully, inch by inch, in his defence of the latter. It is by no means to be denied, however, that Mr. Truran, in his chapter on the economy of heated air, has developed a great deal of practical knowledge, and intelligent, discriminating research, but in many cases the conclusions that he draws seem to me too general.

In the first place, the expression "hot-blast" is rather vague, and as it stands is scarcely more explicit, as characterising a powerful agent, than the term "as big as a piece of chalk" is as a criterion of size. No one doubts the efficacy of compressed air in the operation of smelting; but if the air, hot or cold, were injected under any amount of pressure, and in any given quantity or volume, without the slightest regard to the proportions of the matters charged, the good effects would be neutralised, without, however, any blame attaching itself to the compressed air, *per se*. Such is the case with the hot-blast; its temperature, and the charges put into the furnace, must be carefully regulated to suit the particular case; for instance, zinciferous ores cannot be advantageously blown with a blast heated to above 200° to 260° Fahr., on account of the great depth at which deposits of cadmies would be formed, were the blast at a higher temperature. Again, if in a charcoal or coke furnace the blast be heated above (say) 212° Fahr., the formation of silicium is induced, which renders the pig produced not sufficiently tenacious for castings, and too difficultly refinable, and furnishing a quality of iron too brittle when cold for forging. In fact, it may be questioned if in any case it be advantageous to heat the blast above 560° to 660° Fahr. These temperatures form a striking contrast to the extraordinary idea promulgated, though not, I fancy, seriously entertained, by Mr. Truran of heating the air to the melting point of the iron, to effectuate which, were it possible, it would be necessary to employ a second blast-engine to blow the blowing apparatus. Mr. Truran seems, indeed, to waver between no hot-blast at all, or a blast heated out of all reason.

As for the explanation of the effects produced by the hot-blast, it must be admitted that considerable difficulties oppose themselves to the requisite investigations, it being almost as delicate an operation to obtain a practical knowledge of what passes in the interior of a blast-furnace, as of what goes on in a gun-barrel when the charge is ignited. The amount of caloric thrown in is certainly something; every degree of heat which enters with the blast economises a proportionate quantity of caloric, which would otherwise be absorbed by the cold air from the fiery regions of the boshes, and carried thence higher up in the load, precisely where it is not wanted. Again, we cannot see why Mr. Truran should utterly discard the notion of Berthier, that the mere heating of the air can render it better adapted to support combustion. Combustion is the result of a chemical combination, and we know that most of the chemical affinities become more energetic by heat. Many phenomena are produced in nature by the simple appliance of heat; and one might as well affirm it to be impossible that sugar should enter more readily into solution in hot water than in cold, on the ground that water is water, and sugar sugar, at whatever temperature they may be. But the main cause of the superiority of the hot-blast seems to be the following:—I will premise that the problem proposed is to concentrate the temperature in those regions where the ore, already reduced by the reductive gases, should enter into fusion, and prevent combustion in the upper zones, where these gases exercise their influence. Since combustion, in the case of a blast-furnace, takes place in virtue of the oxygen of the atmospheric air introduced by the blast, it is evident that if we can retain all, or the greater part, of this oxygen in the regions of fusion, and prevent its rising higher, we give a practical solution to the said problem. On the other hand, the air penetrates the load in virtue of its momentum, which is, again, proportionate to its density: therefore, by heating the air we diminish its density to such a point as to render it powerless to penetrate the superincumbent mass of ore and coal. It may be objected that if a diminution of the momentum were the only condition required, the same result should follow a reduction of the velocity obtained by augmenting the diameter of the blowing nozzles, and yet it is well known that if the section of the nozzles is greatly increased, injurious instead of beneficial results follow. This observation is perfectly correct, and proves that there are other essential conditions which depend upon the velocity at which the air enters the furnace. And, in fact, we know that perfect combustion demands a rapid renewing of the surfaces of contact on the parts of the air and the combustible; also, that the less the air is compressed the more the affinity of its oxygen to the carbon of the fuel is diminished, and, consequently, the zone of maximum temperature is scattered, instead of being concentrated. The hypothesis above enunciated, relative to the "reason why" of the hot-blast, is carried out by the well-known fact stated by Mr. Truran, that the hot-blast (at least if greatly heated) does not work advantageously in charcoal furnaces. This is easy to understand, since the charcoal is less compact and gluing than coal, and, therefore, allows the passage of the air, even at a reduced density.

In bringing this article to a conclusion I will briefly sketch the principal effects attributed to the hot-blast by Mons. B. Valerius. There is, first, a concentration of heat in the lower regions of the furnace, the liquid products of the furnace coming out in a high state of fluidity, the tuyeres assuming a more brilliant appearance, casting is facilitated, the pig is greyer, and in slowly cooling throws out a greater quantity of graphite. To this increase of temperature in the zone of fusion corresponds a diminution of that of the upper regions of the furnace, where are formed abundant deposits of cadmus, where minerals containing zinc are being smelted; these are reduced to smoke and disappear, when cold air is substituted. Though the charges descend frequently more slowly with hot air than with cold, still, as the quantity of ore charged is greater in proportion to the fuel and flux, the daily make of the furnace may, nevertheless, increase. With the hot-blast, the performance of the furnace is rendered much more regular and less liable to interruption than when cold air is used; and if an accident or stoppage occur, the hot-blast is a powerful auxiliary in its removal, as the effects of an increase in its temperature are immediately felt, while those of an augmentation of the charge of combustible would not manifest themselves for many hours.

The operation of blowing-in is greatly facilitated: in the application of the hot-blast to the charcoal furnace of Malapane (Upper Silesia) it was found that after the first week a charcoal furnace, working with hot air, could receive as heavy charges as a cold air furnace after three weeks' time; also, that the iron furnished by the first running was fit for any description of castings, while the first running of the cold air furnace is either white, or so heavy as to be gotten with difficulty from the crucible.

The hot-blast acts very advantageously in the treatment of refractory ores, and particularly of substances such as forge scraps, which are at once very fusible and very difficult of reduction. The high temperature of the regions of the boshes ensures a perfect fusion, while the comparative coolness of the upper parts permits the reduction to take place before fusion commences, or the affinity of the silica begins to operate. The facility with which refractory charges are treated by means of the hot-blast may be turned to account in many cases in operating the desulfuration of the ores used, since an excess of limestone is considered as favouring the combination of the sulphur contained in the mineral or combustible with the cinder, and not with the iron. At the same time, the addition of this excess of limestone renders the charge too difficultly fusible for cold air. The hot-blast augments the tendency of falling of the load; as the charge of mineral is increased in proportion to the coal, its greater weight tends to cause its perpendicular descent, while the combustible is forced out against the sides.

Such are the principal effects of the hot-blast, as given by M. Valerius, a gentleman whose great experience in the Belgian iron-works, and whose scientific attainments render him eminently capable to discuss this important question. In conclusion, I would repeat my previous observation, that whatever *original* remarks figure in this paper are thrown out merely as suggestions, and by no means in a spirit of dictation to those whose practical and scientific acquirements are so much beyond my own.

E. SHERMAN GOULD,
Elève de l'Ecole des Mines de St. Etienne.

SHIP PLATES, AND IRON-CLAD VESSELS OF WAR.

SIR,—At a time when the subject of "ships in armour" seems to claim so large a share of public attention, it may not be amiss to give a list of the best and strongest steel and iron materials which this country produces, according to careful tests which have been made, in order to indicate the tensile strength of these materials. I, therefore, subjoin a list of the best steels and irons operated upon to ascertain their breaking strain per square inch, and I have selected the results obtained from testing the best specimens produced by each manufacturer. I would observe that my own specimens which have been tested are manufactured wholly from native produce, whilst all the steel specimens furnished by other manufacturers, which show a high degree of tensile strength, are prepared from expensive Swedish or Acadian bar-irons.

STEELS.		Breaking strain per square inch.
R. MUSHET	Homogeneous tough metal A.....Lbs.	168·000
Ditto	Cyanogen cast steel	156·800
THOS. JOWITT	Cast tool steel	148·294
THOS. TURTON AND SONS	Cast steel from Acadian iron	145·383
THOS. JOWITT	Cast chisel steel	139·979
Ditto	Cast drift steel	130·447
Ditto	Double shear steel	125·321
BESSEMER	Cast tool steel	123·165
MOSS AND GAMBLE	Cast rivet steel	116·763
WILKINSON	Blister steel	116·183
NAYLOR, VICKERS, AND CO.	Cast rivet steel	112·262
SHORTRIDGE AND HOWELL	Homogeneous metal	99·570
KRUPP	Cast steel	96·208
THOS. JOWITT	Spring steel	82·719
MERSEY COMPANY	Puddled steel	75·304
BLOCHAIRN	Puddled steel	75·114
IRONS.		
R. MUSHET	Hammered iron .....Lbs.	94·080
Ditto	Bolt iron	76·206
ST. ROLLOX COMPANY	Best rivet iron	68·848
LOW MOOR	Best	67·876
GOVAN	Best	66·363
BOWLING	Best	65·701
FARNLEY COMPANY	Best	64·133
J. BRADLEY AND CO.	Best	63·604
LORD WARD	Best	63·373
COATBRIDGE	Best rivet iron	63·577
MERSEY COMPANY	Best	62·411
GLASGOW	Best	60·817
G. B. THORNEYCROFT AND CO.	Best rivet iron	60·528
ULVERSTONE	Best rivet iron	59·330
R. SOLLOCH	Best rivet iron	59·226

Coleford, March 6. ROBERT MUSHET.

IRON MANUFACTURE.

SIR,—In reply to Mr. Rogers, I neither directly nor by "implication" charged that gentleman with condemning my invention, so far as "the introduction of charcoal" was concerned, for in a former letter I acknowledged with thanks the admission of Mr. Rogers that in this respect, and in relation to the economical application of "smoke, heated air," &c., it was so far valuable. I have never denied that patents have previously been taken out for the improvement of iron by the introduction of charcoal, but I have affirmed, what Mr. Rogers does not seem disposed to deny, that such patents have failed to be worked profitably, or have been suffered to lapse from expiry of time, *or other causes best known to the patentees*. I stated in my last that my invention differs materially in its *principle and mode* of application from all previous ones, and because I do not think it necessary to give Mr. Rogers or the public *the precise details of either* till my invention is in full operation, I am twitted with the "particularity" of my specification, as though a document of the kind had not invariably a "customary formula." It is because I do *not* "overlook the danger to my patent," that I adopt the necessary precaution of absolute demonstration by personal superintendence before committing its details to persons who, it would seem to me, would either avail themselves unfairly of my experience, or being "nothing if not critical," would gladly find in them a subject for abuse and invective. I am only too happy to be instructed by Mr. Rogers, or any other man capable of imparting sound practical information; and I am still open fairly to discuss the merits of my patented process, but I decline to go back to all the inventions officially reported, or to wander with the author of the "Atomic Theory" into matter utterly irrelevant to the question at issue. Mr. Rogers admits that two parts of my patented invention are worthy of commendation, and if I can demonstrate, as I can and will, if health, and time, and means allow, that the remaining parts are distinct in *principle* and in the *mode* of application from all former patented inventions for the improvement of iron manufacture, I hope that gentleman will not only readily admit the same, but will rejoice with his fellow-labourer in the important field of iron manufacture in his achievement of a great victory over difficulties that hitherto have proved insurmountable to others.

When age and experience have matured the judgment and rubbed off the asperities which too frequently characterise the man of active business habits in the bustling thoroughfares of life, where others jostle and elbow him at every turn, we expect to find suavity and discretion walking hand-in-hand, welcoming with smiles the strugglers for success to the haven of their hopes; and I cannot, therefore, help regretting that a veteran like my unprovoked and unsolicited opponent should rest unquietly on his well-earned laurels, and enter once more the arena of conflict to do battle with aspiring invention, and strive to crush in the bud the latest discoveries in the field of science, which he himself has fought and won, like another "Iron Duke," his hundred battles.

JOHN ONIONS.

RISCA EXPLOSION—THE EVIDENCE.—No. II.

SIR,—My attention is next drawn to Mr. THOMAS FORSTER BROWN, of Machen, who, I imagine, evinces a feeling of tenderness and humanity to the poor sufferers by the late explosion, when he says that his principal aim on the three first days was to render aid in the recovery of the bodies of the poor fellows who had been killed by the explosion. This is much to be commended. He continues to say that on Dec. 1, in passing along the fourth east level, he noticed some of the props leaning at the top towards the slope. This appears to me more like an examination of the cause of the explosion than rendering aid in getting out the bodies of the poor fellows that were killed. It must be remembered that Dec. 1 was the day the explosion happened, and the fourth east the most extreme part of the workings. Therefore, I would simply ask if there is anything that would justify the public in coming to the conclusion that the workings were so much shattered and blown about, as represented by Messrs. Wales, Palmer, Brown, and Harrison on evidence, when Mr. Brown admits that he was actually examining the props in No. 4 east on Dec. 1? I think surely that the public would be justified in believing that if all the doors, frames, boshings, stoppings, old gobs, &c., were blown to pieces the air would cut short to the upcast shaft; this would be the case according to their own evidence, therefore the fourth east would be left without any air. Under these circumstances, how and from whence did Mr. Brown get air to this heading, so as to clear the foul air and sulphur after the explosion which happened in the morning, to enable him to make the before-mentioned examination? To me this seems wonderful, and contrary to reason; but I suppose such wonders will never cease in Risca while the celebrated and ingenious viewer, Mr. Harrison, is there. And how can Mr. Brown reconcile this statement with what he terms in his report the difficulties they had to contend with in removing the gas from the third and fourth east after the explosion? Mr. Brown says this proves that the discharge of gas continued for some days after the explosion. And in Mr. Palmer's report he seems to lay great stress on the difficulties he had to contend with, after arriving on the evening of Dec. 3, to approach the fourth east. This gentleman further says that he descended the pit, and proceeded down the slope; but without mentioning the innumerable cross-headings, wind-roads, spout-holes, boshings, gobs, &c., he at last says that gas was coming up No. 2 cross-heading from the third east level, and passing on with the air to the fall between Nos. 4 and 5 cross-headings, where a shift of men were working, and that he considered this to be dangerous, therefore, after consulting with Mr. Brough, he had a door put up in the slope. What a mercy it was that such a man as Mr. Palmer happened to be there to suggest this plan to the Government Inspector. Now, it appears to me that all this time the fourth east was quite inaccessible, and, so far as I can understand, they had only reached No. 2 level heading on Dec. 3. This statement does not appear to correspond with Mr. Brown. Still, no doubt, this gentleman will give a lucid explanation, allowing him a fortnight to consider the matter, as they had to analyse my report. I often feel sorry my report should have given them so much trouble. No doubt the subject would have been nicely lapped up had I not stepped in to take share of the play with them.

2dly. Comes Mr. Brown's calculations as to the distance the air had to travel before the explosion and when I was there. In his report he states twice that the total distance the air-current had to travel on the east side from the downcast to the upcast shaft was 4200 yards; and on reference to Mr. Wales's report, he positively states it was three miles, equal to 5280 yards; and Mr. Palmer with the utmost assurance says the distance is three miles and 400 yards, equal to 5680 yards. Perhaps this bewitching mistake crept in at the wine table, while analysing my report. Such mistakes as these will easily account for the difference in the water-gauge, as I pointed out last week. Now let us try the accuracy of Mr. Brown's figures as to the distance the air had to travel. From downcast shaft to top of slope 150 yards, from top of slope to bottom 650 yards, equal 800 yards. Allow No. 4 east to be 200 yards (no doubt this is more); say the air had the same distance to return to the separation-doors of 800 yards. Again, from separation-doors to upcast shaft 500 yards, which will equal 2300 yards in straight lines (unfortunately, very much unlike the Black Vein workings). Now, if we take 2300 yards from 4200, this will leave 1900 yards, and not 2200, as Mr. Brown says that the total length of the air-passages on the east side were reduced that day. Of course, I assume here that the air was circulating through the fourth east on Jan. 3 as it was when I tried it, otherwise it could not be a fair trial. Perhaps this slight error crept in the same way as the other; at all events, it proves that when once a man deviates from the path of truth he requires a good memory, otherwise he is much easier caught than the lame. I admit they had a very good example placed before them by the viewer, particularly if we test the truth of one assertion by the actual falsehood of another,—stating on oath that all bratticing was carried on within 6 feet of the face, which was afterwards proved to be 38 feet; also, ventilating gobs, safety-doors, &c., is a still further proof of what the same person is capable of saying.

3dly. Mr. Brown's careful attention is directed to blowers, and particularly at Sage's stall, which he considers to be the centre of the explosion. He says,—"I have come to the conclusion that there was a considerable quantity of fire-damp in that neighbourhood immediately before the explosion." I should think this gentleman could with equal fairness come to the conclusion that there was a considerable quantity of fire-damp in several other places besides Sage's stall immediately before the explosion, or what could be the reason that every man who worked at the extreme end of No. 3 west was burnt, and all killed, and had there been 100 more they would have shared the same fate. It must be remembered that Sage's stall was at the extreme east; the other at the extreme west; and at this latter place the timber was charred to some depth, and the brattices blown into splinters like matches. See also David Brimble in the same side, between No. 1 and No. 2 level headings, almost roasted alive. But these positive proofs of gas being all over the workings do not seem to answer Mr. Brown's purpose, as nothing but a blower would exculpate the viewer from fault; and what a fortunate thing that Mr. Buddle in the North, so far back as 1829, found out those freaks of Nature, and how suitable this discovery turned out for the Risca folks. Mr. Brown says "that it must be borne in mind that the Black Vein at Risca is subject to blowers." I should like to know how Mr. Brown can prove this. I was at Risca for ten years, and I never knew anything approaching the imaginary blower that has just gone by there. I have seen small fissures that would discharge gas in small quantities, but not under pressure; they were sometimes fired by the colliers, and would burn in contact with the air like a dim gaslight; but these were very rare indeed, and if fifty such poured their contents at the same time it would take weeks to accumulate such a quantity as was lately exploded there. Still it appears to me that Mr. Brown and his colleagues have, of course, come to the conclusion that the blower was an extraordinary one in magnitude, and discharged its contents with great rapidity. Now, granting this to be the case, are those gentlemen aware that whatever the magnitude of the blower may be, it would take ten to fifteen times its volume of air to diffuse with it so as to bring it to an explosive point? Mr. Harrison seems to treat it with the utmost coolness and indifference, and thinks that 20,000 cubic feet per minute is only a moderate quantity to be discharged. Supposing this to be the case, it would be more than probable that all the lights in the neighbourhood of this imaginary blower would have been extinguished, and given sufficient warning for the men to withdraw, as with the quantity of air reported to be passing at the time of the explosion it would have taken ten minutes to dilute it to an explosive point, and a quarter of an hour so as to enable it to detonate powerfully. I believe pure carburetted hydrogen requires two volumes of oxygen to one of gas to become slightly explosive, and would take three volumes of oxygen to one of gas to explode powerfully. Now, as oxygen only constitutes one-fifth of the atmosphere, it would take from ten to fifteen volumes of the latter to one of gas to cause the fearful destruction it did at Risca. This would give ample time for the men to withdraw, at least as far as the engine slope—a distance of about 200 or 300 yards; but it appears that only Jenkins was found from the seats of working. And this being all imaginary as to the cause of his being where he was found, I am willing to put the most charitable construction upon it; but I cannot believe that if this man's lamp was the cause of the explosion he could have run one yard from the spot; and I believe the pressure that surrounded him, caused by the sudden expansion of the gases, would have killed him immediately.

4thly. It appeared to Mr. Brown that a current of air equal to 19,000 cubic feet per minute ventilated the fourth east workings, where the accumulation of gas and explosion, in his opinion, occurred. Keeping in view the power of the ventilating machine, he could not see how by further splitting of air in this mine an equal or increased quantity of air could be obtained for these workings; and, under these circumstances, he was of the opinion that the air was judiciously and properly distributed, and cannot with fairness be designated a primitive mode of ventilation. Just here I think it is but fair that I should refer to Mr. Wales's report, where he very lucidly describes the 33 splits in the celebrated model colliery at Hetton, and particularly the main current in Eppleton Pit, which is 55,700 cubic feet per minute, divided into 11 splits, giving an average of 5063 cubic feet per minute, the longest split having to travel five miles. Now, if splitting of air is useless under 19,000 cubic feet, as at Risca, what has induced the officials to be so foolish at a model colliery for ventilation, like the Hetton, to split it down to so low a scale as 5063 cubic feet, and the same current travelling five miles; the longest at Risca being only three miles, or, as Mr. Brown says, 4200 yards? Was it not their intention to increase the quantity of air, and, at the same time, diminish the friction, by passing a less quantity through air-ways of moderate area, instead of passing larger quantities through the same size air-ways? If this were not the case, certainly the managers of this model colliery distributed the air injudiciously, and they should send their viewer to Risca to take a lesson from Mr. Harrison, and to retrograde into the antediluvian mode now practised at Risca. I contend there is no system on record more ancient or primitive; and I think if Noah were alive he would bear testimony to this, that he had a more scientific and judicious mode of distributing the air amongst his living creatures in the Ark. The 19,000 cubic feet of air that Mr. Brown says passed into the No. 4 east, and the 3000 cubic feet scale at No. 1 east, could be easily divided into four splits, one at each level heading, instead of passing 19,000 cubic feet through air-ways of 11 to 22½ ft. sectional area, and passing this same current by every man working on the east side, which is two-thirds the number of men in the pit, this air must be highly charged with gas before it is discharged into the return. But by splitting the air into four, each split would ventilate one-fourth of the east side separately, the current being 5500 cubic feet per split. If this diminished quantity had been travelling No. 4 east at the time of the supposed blower it would have taken above half an hour to dilute the gas to an explosive point; this would have given sufficient warning for the men to withdraw.

5thly. I do not intend to dwell much on the evidence of Mr. Alfred Septemius Palmer, but my attention is drawn to an error as to the distance the air had to travel in the east side. This gentleman makes it 3 miles and 400 yards, or equal to 5680 yards. Mr. Wales makes it 5280 yards. Now, Mr. Brown makes the distance to be 4200 yards, a difference of nearly one mile in three; probably this may be a very fair exponent of the whole evidence given by these gentlemen, and Mr. Palmer, like the others, takes rest by referring to the North. He quotes some very extraordinary things done at Haswell Colliery, and a labyrinth of air-courses. Then he goes to Walker's Colliery, Newcastle, where 11 tons of coal was displaced by fire-damp. It appears to me that this gentleman was an eye witness to these extraordinary freaks of Nature; still such wonderful things are unknown to take place in the Black Vein, Risca, and I cannot see the utility of quoting such things; and when this gentleman was cross-examined he said he did not think it was the fireman's duty to look for gas over the timber. I conclude by this that he had fortified himself in such a position as to be able to do or say anything to suit the requirements of the case, or he could not have known much of the duties of a fireman, after the evidence of Thomas Phillips, one of the colliers (which was not attempted to be contradicted by any), that a fall was over the timber of the double parting at the bottom of the slope (where naked lights were used), which dislodged 400 or 500 trams of rubbish. Now each of those trams will hold at least one cubic yard. Then there was an inverted cavity of 450 cubic yards, or equal to 12,150 cubic feet of inflammable gas, and this was well known to the viewer long before the explosion, and probably naked lights passing and repassing under this magazine of gas scores of times in one day. This will give an idea to the public of Mr. Palmer's views as regards the duty of a fireman, and I shall leave the same tribunal to decide whether this was careful management on behalf of the viewer or not. I do not remember ever reading of anything so reckless as this in the annals of colliery explosions. I have no hesitation in saying that if this alone exploded it would have killed every living creature for a great distance round.

MORGAN MORGAN,
Mining Engineer.

Brendon Hills, Somerset, March 4.

[*To be continued in next week's Mining Journal.*]

VENTILATION OF COAL MINES.

SIR,—In Mr. Morgan's review of the evidence at the Risca inquest, he states the engine for working the ventilation at Risca to be an 18-in. cylinder, 3-ft. stroke; speed of piston, 150 ft. per minute; pressure of steam, 40 lbs. per square inch: this gives 46-horse power—Mr. Morgan has 42. The speed of steam-piston at 150 ft. per minute will require 25 double strokes per minute; and as the speed of the ventilator has generally been stated at eight double strokes per minute, 6-ft. stroke, I infer the speed is diminished in the ventilator in the ratio of 150 to 96 ft. There are two air-cylinders, 18 ft. in diameter each, 6-ft. stroke: at eight strokes per minute there should be an exhaustion of 48,858 cubic feet per minute for both cylinders. In an extensive mine, the result in practice will always fall short of this quantity; in proportion to the existence to be overcome will the air be in a state of tension. Accordingly, we find the air on the morning of the explosion measured only 37,000 cubic feet per minute, at the rate of eight strokes per minute, showing a loss of upwards of 11,000 cubic feet per minute, either from the drag in the mine or imperfection in the machinery. Again, Mr. Morgan's measurements on Jan. 24 showed a pressure at the ventilator of 4 in. of water, equal to 20·8 lbs. per square foot. The quantity of air passing down the engine-slope was then 44,752 cubic feet per minute, at eight strokes per minute: this gives a result of 28-horse power as the working effect of the engine. The pressure being taken at the ventilator, should include all the resistances to be overcome in the mine—the resistance from the air passing through the valves, the friction of the ventilator, and the engine itself, should be deducted. If one-fourth be allowed for these, the effective power of the engine would be 34½-horse power; and 34½—28, leaves 6½-horse power as surplus to be accounted for. If the pressure was taken at the separation doors, 500 yards from the machine, and was found so high as 4 inches of water column, then would the resistance in that distance have to be included in the total resistances, as amounting to 34½-horse power.

Mr. Morgan comes manfully to the rescue of native talent in Wales, and I am glad he upholds machine ventilation as more powerful than any other which, I hope, may have the effect of bringing them more into use. I may observe that any drag or obstruction in the mine would be indicated at any time by the water-column rising in a gauge placed at the ventilator, independent of the increased speed of the piston. The furnace-drag is also indicated by the pressure and temperature of the upcast rising as the air diminishes. In reference to splitting air in the ventilation of coal mines, which has been the subject of two letters from Mr. Hopton lately in the *Mining Journal*, we do not understand Mr. Hopton's proposition is an original one, or that he proposes splitting the air to a greater extent than is done in this district; but that he advocates its adoption in collieries where the ventilation is defective in that respect, as was the case at Lund Hill previous to the explosion. In his "Suggestions for the Safe Working of Mines," in the Journal of Jan. 12, the plan is good, and is generally acted upon in this and other colliery districts; that is, to have districts, or groups of workings, isolated one from another, and a distinct portion of air assigned to each. If, as stated in last week's Journal, 24,000 cubic feet of air be circulated through four divisions of workings, instead of 6000 to each one, thus giving a superabundant supply of fresh air to the first division; whereas, in the last division the gases from all the four divisions would mix and circulate with the air. But the principal advantage gained by splitting the air into four distinct currents would be an augmentation in the gross quantity; in some cases this might amount to one-half more, or a total of 36,000 cubic feet, equal to 9000 cubic feet for each division. This would be equal to doubling the furnace power, as it requires four times the furnace power to double a given quantity of air in circulation under the same conditions. Therefore, 9000 cubic feet in each division would cope much better with the production of gas in one than 24,000 would after passing through three and into the fourth division. The risk of explosion is thus lessened by supplying a greater proportion of air to gas produced; and continuous explosions from one division, or one goaf to another, are likely to be avoided, by stopping the direct communication between them.

The force of an explosion may be said to be in proportion to the volume

of carburetted hydrogen gas and fresh air accumulated, eight parts of air to one of gas being most explosive; but a mixture of carbonic acid, or styth, neutralises the explosive power of the above mixture so much as to render a considerable accumulation of it, when exploded, almost harmless, and showing a lengthened top on the flame of a candle or lamp. The destructive effects of an explosion of carburetted hydrogen with air may be greater or less, as there is space for the blast to spread itself; if confined to narrow bounds the force of the blast, or concussion of the air, may extend to the pit, destroying stoppings, &c., there, thus cutting off all communications of air to the interior of the mine. On the whole, the system of splitting the currents secures great advantages, in saving doors, in limiting the extent to which explosions spread themselves, and, in many cases, increasing the gross quantity of air in circulation. M. B. GARDNER.

March 5.

METALLIFEROUS MINES—GOVERNMENT INSPECTION.

SIR,—The inference drawn from the article in your Journal of last week, from a correspondent, "On the Government Inspection of Metalliferous Mines," is that I am desirous of *the introduction of Governmental interference.* Allow me to assure you that, much as I desire to see the condition of the working miner improved, I do not believe it will ever be effected by any system of Government interference. ROBERT HUNT.

March 5.

GOVERNMENT INSPECTION FOR CORNISH MINES.

SIR,—I am sure you will have the thanks of every working miner in the county for any support you may give them by advocating the introduction of Government Inspection for Cornish mines, for it is but too well known here that working in the mines has a fearful effect upon the miner's health, and that this results entirely from the causes which might be removed; and that, in addition to this, there are innumerable accidents which might be prevented. By the introduction of a stringent system of Government Inspection these evils might be remedied. The figures of a reliable statist—Mr. Roberton—published in the Manchester Statistical Society's "Transactions," show that the deaths of children under five years old in a mining parish, where pure air is breathed, and there is everything to render them more healthy than in other districts, are more numerous than even in large and unhealthy towns—the deaths amongst the miners' children being 55 per cent., whilst those amongst the children of Liverpool are 48 per cent.; of Leeds, 46 per cent.; and of London, 40 per cent. After the publication of such facts, can it be questioned that the introduction of official supervision will be beneficial?

It is supposed that Cornish miners and mine adventurers are averse to governmental interference, but I do not think that half-a-dozen would be found to raise their voice against it. Indeed, more than 18 months since a very ably-written article was published in the *West Briton*, and, as the statements are most worthy of consideration, I am sure you will permit me to make a short extract:—

> Now, what are the principal causes of this extreme unhealthiness of the mining population, of their early disqualification for labour, and of their premature deaths? The answer to this is not far to seek: the chief causes are unquestionably the bad ventilation of the mines, and the use of ladders in ascending and descending the mine shafts. The want of good ventilation is in a double respect very prejudicial to health. In the first place, the high temperature of the very deep mines has the most exhausting effect upon the miners. Some of them have been known to lose as much as 6 lbs. of weight from profuse perspiration. According to Mr. Couch, the average loss of weight is about 3¾ lbs. during the time they are underground, and in some cases even as much as 10 lbs. have been lost by the time they return "to grass." The foulness of air, however, occasioned by deficient ventilation, is the worst effect produced. When the air is in a pure state, it ought to have 21 parts of oxygen to 79 of nitrogen. But according to the late Mr. Herbert Mackworth, who paid a good deal of attention to this subject, on an analysis of 18 samples of air taken in some of the deeper mines in the county, the percentage of oxygen was reduced to about 17, while that of nitrogen was raised to about 82, together with an infusion of carbonic acid gas. The pernicious effect of this may be judged of from the fact that a candle will gradually cease to burn when the proportion of oxygen falls to 16, and at the point of 14 per cent. suffocation will ensue. So still is the air in most of the Cornish mines that one never hears of a candle being extinguished in the galleries by a current, and in many cases the only way to get light enough to work by is to hold two candles together horizontally. The pollution of the air occasioned by gunpowder smoke is very injurious to the miner. At Dolcoath Mine, for instance, about 9 or 10 tons of gunpowder are consumed annually. Now, taking all these together—the unceasing waste of oxygen by human respiration, and by the combustion of numerous candles, and the smoke and unrespirable gases set free by the continued blasting—some faint conception may be formed of the sort of atmosphere which the miner is compelled to enhale, and of the effect it must produce on his health. Such is the effect of the dense smoke, together with the floating metallic dust loading the lungs of the underground workers, that for hours after coming to the surface their expectoration is of a deep black colour. We are apt to think of the Cornish miner as possessing a great advantage over the worker in coal mines, inasmuch as he is not exposed to those inflammable and deadly gases which so often occasion such fearful accidents in the latter. The truth, however, we suspect to be that the normal condition of the coal miner is much better than that of his brother in the metallic mines of this county. As a general rule, the coal mines are admirably ventilated, and the terrible accidents of which we occasionally hear are to be regarded as merely exceptional incidents. The sudden destruction of some 30 or 40 men in a coal mine is heard of with horror throughout the whole country, but the far greater devastation of human life in Cornish mines is never thought of, simply because it happens to be a gradual and regular process. In addition to the bad ventilation of the mines, the mode of ascent by perpendicular ladders, in use in most of them, is probably even still more destructive to the health of the miners. Sir Charles Lemon, indeed, in his statistical papers on mining, published more than 20 years ago, attributed the chest diseases of the miners solely to this cause. Conceive the effect of having to ascend 1800 ft. of ladder-way after a hard day's work. It is hardly possible to imagine anything more exhausting. The waste of flesh, metal energy, and animal spirits is said to be grievous, and the excessive action of the heart and lungs which is called for by the exertion is such that on reaching the surface the miner is often completely overpowered and wholly unable to speak for some time.

This state of things, it is thought, Government Inspection would alter, and surely when human life is at stake no experiment even should be left untried to prevent its unnecessary sacrifice. I know one objection is, that it would be difficult to find practical Cornish miners and mine captains competent to undertake the office of Inspectors, but this I think is immaterial. It would be easy to appoint such men as Dr. Barham, Mr. R. Q. Couch, &c., who, as all Cornwall knows, would fulfil the duties with skill and integrity; and if they told the captain that fresh air *must* be carried to the ends, I do not believe there is a captain that would be at a loss how to do it. At all events, let Government Inspection be tried—by a temporary bill as was first tried with coal mines—and I have no fear of the result.

Camborne, March 6. A MINE AGENT.

VENTILATING AND WORKING METALLIC MINES.

SIR,—Seeing that the mode of ventilating and working metallic mines is attracting some attention, I think a few remarks on the subject may not be inappropriate. It appears to be understood that a much higher mortality occurs among the workers in those mines than is necessary. Now, if this be admitted as capable of proof, it must naturally follow that it increases to a great degree the cost of working those mines. But it may be probable that the expense which would be entailed in keeping up a permanent mode of artificial ventilation may deter many from trying the experiment. This idea, I think, would prove fallacious, as the reduced cost of working, the preservation of timber and other materials in the levels, would go far to balance the additional expenditure. Thinking it may possibly interest some of your readers, I subjoin an account of the cost of erecting and working a Colliery Ventilating Furnace on a small scale, and at a shallow depth (400 feet) from the surface:—The first cost of erecting the furnace is 200*l.* The quantity of air, 18,000 cubic feet per minute, is sufficient for a large metallic mine, we would imagine; the quantity of coal consumed is 39 cwts. per day, or 3·03 lbs. per minute, so that 5940 cubic feet of air per minute is got for each 1 lb. of coal consumed. Now, the cost of this coal at some metallic mines would probably be a serious item; but very inferior coal will suit the purpose, it must be remembered. If we suppose it to cost 15s. per ton, this will give 1*l.* 10s. per day for this alone; and, say 80*l.* per annum for two labourers, this would make the standing expense 727*l.* per annum. I would, however, suggest that at mines where large engines are employed, and good chimneys, which will generally be the case, a sufficient ventilation could be established by a very simple arrangement, which would entail no extra expense whatever further than the first cost of the erections and arrangements, which we think could not exceed from 40*l.* to 60*l.* This would be a trifling expense. I have tried two modes to effect this object, and both have succeeded; one of them, however, entails a small standing cost, the other referred to none whatever. A MINING ENGINEER.

Gateshead, March 5.

THE MINERS OF CORNWALL—A "MINERS' FUND."

SIR,—Seeing that much has been said and done in aid of the "Miners' Association," and that so many of our Cornish gentlemen are taking a lively interest in the undertaking, I sincerely hope, by imparting useful information to a deserving class of men, their efforts will be crowned with success. A question, however, has occurred to my mind whether there is not a something still deserving attention—a "Miners' Fund"—to provide the means of support in sickness and when past labour, either from injuries received or old age. It may be argued that there are already institutions established for that purpose, such as friendly societies, &c.; but, granting there are societies, the benefits they afford hold no comparison with the permanent support that would be derived from a "Fund," such as the miners of this county have in their power to raise. We will suppose there are 30,000 men, and they would each subscribe 1s. per month, the result of one year's accumulation would be no less than 18,000*l.*; this sum properly applied would in all probability be sufficient to put aside all dependence on parochial relief, and under any calamity keep them from becoming inmates of that house which is so generally dreaded by the poor, and in consideration of the numbers of men who die annually leaving families, it would furnish ample means to render a comfortable provision to the widows and orphans. I am rather surprised that the largest body of men in the county have so long disregarded their own interests; but it is not too late to begin now, and I, therefore, invite their attention to the subject, hoping ere long that I shall see them "One and All" with their shoulder to the wheel, in right good earnest, convinced as they must be of its benefit to themselves and families. An institution on such a broad principle would create advantages that are unknown to the miner, and I think it would be likely to have a pleasing effect on all ratepayers. R. W. JENKIN.

Assay Office, Callington, March 2.

COPPER MINING—CORNISH DRY ASSAY.

SIR,—I am glad to find that Mr. Henderson's experiments are beginning to attract some attention, and I consider the copper miner under an additional obligation to him for the valuable information in his letter of Feb. 20. I have read that letter with great satisfaction, because it records just such an experiment as I would have tried had I a furnace; and, further, because it confirms to a great extent, if not altogether, the opinion expressed in my former letter, to which Mr. Henderson refers, that at least 1 per cent. is lost by the use of common salt as a flux in assaying copper.

In Mr. Henderson's first experiment there was a loss of 4·05 grains on 203·75 grains, or about 2 per cent., and I think that experiment alone should be taken into consideration, as fulfilling the condition in which the assayer uses salt. In the other experiments a large portion of the chlorine had, doubtless, been evaporated, and the remainder being partially saturated with the copper, naturally exhibited a weaker affinity for it. If Mr. Henderson had supplied a fresh quantity of salt in each experiment, discarding what he had previously employed, I suspect the loss would have been much greater. I do not think the copper assayers generally take the trouble to dissolve the copper out of their slags in the way Mr. Henderson describes; hence, whatever they may contain is lost to the miner.

The various letters on this subject leave little doubt that a considerable loss occurs from the use of salt in the assaying of copper; and when a waste of 1 per cent. entails a loss of 200,000*l.* per annum on the miners of Cornwall alone, the mode of assaying becomes to them a subject of great importance, especially if by the present method assays may vary to the extent of 2 per cent.—4, *Myrtle-street, Liverpool, March 5.* W. RICKARD.

CORNISH DRY ASSAY—SMELTERS' PROFITS.

SIR,—I have observed in your valuable Journal several letters on this subject, and particularly one last week, in which your correspondent wishes to know whether this assay is not a part and parcel of the monopoly at Swansea as regards the copper smelters. I can assure him that he is not in error in this respect, as a very considerable part of the profit as at present made by them consists of the difference between the Cornish and Swansea assays, which is acknowledged by them to be fully 1 per cent.; and it is not, perhaps, generally known that the smelters always buy upon the Cornish assay even the ores which are sold at the Swansea ticketings, which are always sent to Cornwall to have the samples assayed after they are taken at Swansea. By purchasing upon this principle their profits are enormously increased, but, of course, greatly to the loss of the miners, as it is manifest that if they take 1 per cent. less than the value of the copper actually contained in the ores the loss to the miner is very great, and the profit to the smelter greater in proportion. Taking the produce of Cornish ores at 7 per cent., which I am aware is above the average, the gain of the produce, and for which the smelter does not pay, will at the present price of ores give the smelter an extra profit of nearly 14*l.* upon every ton of copper which he reduces. This is one of the grievances which the miner now labours under, and which he will have to put up with until he can find some means to break through this fearful monopoly.

Plymouth, March 6. A MINER.

CORNISH DRY ASSAY VERSUS HUMID.

SIR,—I noticed the remarks of your correspondent, "A Director of Copper Mines," with pleasure, though he is certainly very severe on his Cornish assay-masters. I believe those who purchase copper ores should be the best judges of the value of the article they ticket for and purchase. I judge of the ability exercised by themselves and their assayers by the "excess" displayed in the published ticketing lists. These are liable to considerable variation—more, I believe, owing to the particular class the smelter is desirous to purchase than to the difference of assay. Had the smelters' assayers such serious discrepancies as your correspondent mentions, I am quite sure the cupidity as well as the fair trading of the copper purchasers would take advantage of them. The letter shows an earnest desire to arrive at the best method. At present the Cornish assayers, whom he thus broadly attacks, give far more generally the value of the ore in the market by their dry assay than I ever get by the wet process, whether procured in London, Glasgow, or Bristol. I practice the wet assay for my own guidance, as being, as your correspondent says, the more satisfactory in eliminating every particle of metal; but were I to report the value of my parcels of ore by these results I should be exceedingly blamed by my committees. I, therefore, adopt the dry assay for my employers, and the wet for myself.

I should rejoice indeed to see a company formed who would practice an improved method of separation, when that process which was proved to extract the greatest quantity on a large scale at the least cost should be the guide for the mine agent in making his valuations. Mr. Henderson purposed erecting works at or near Glasgow, but abandoned the idea, from not being able to obtain regular and adequate supplies of ores. Mr. Henderson need not fear that cause, as his supplies would be regular, certain, and vast. Could he obtain by any process 2¼ per cent. out of copper refuse from vitriol-works, slag, or low-priced ores, I think I know a source whence he could draw 1000 tons per month alone. Such letters as I refer to are of great good, especially when emanating from such sources as directors of copper mines. They may see some of the reasons why the humid process is not general in Cornwall. No doubt exists but vast improvements are to be made; it behoves such parties as the author of the letter referred to that they take the initiative, set the example, "bell the cat," when they will certainly be followed by such as the writer of this letter.

A MINE AGENT AND CORNISHMAN.

THE WELSH SLATE TRADE.

SIR,—For some weeks past I have noticed letters in the Journal directing the attention of the public to Welsh slate quarries, and recommending the investment of capital therein, as certain, under ordinary advantages, and with proper management, to yield large profits. I can fully confirm, from several years' personal acquaintance with the slate-producing districts in Wales—Carnarvonshire more especially—the facts asserted in those letters, and I hope they will meet with the attention they deserve. I think the public should be made acquainted, in some degree, with the districts brought before their notice; and, as I have not seen any description thereof in the Journal, I beg to submit a short sketch of the slate-producing districts of Carnarvon.

Starting from Aber, next station to Bangor on the Chester side, Chester and Holyhead Railway, and going south, we come in about two miles to the first develpment of slate, on Moel Union. About four miles south-west of this are the Penrhyn Quarries; their slates are conveyed to Bangor, five miles by tramway, and then shipped: 3¼ miles further, on the same course, are the Dinorwig Quarries; their produce is conveyed eight miles by tramway, to Port Dinorwig, and there shipped. These great works have been often described, and are well known; they require no further comment. We here cross by Pont-y-Bala, the neck of land separating Llyn Padarn from Llyn Reris, by the Victoria Hotel, and ascend Cefn Du, on the south-west slope of which we find several quarries, as Glyn, Bwlch-y-Groes, Waurfawr, &c. There is here every facility for making a good quarry. Blue and red slate are open to view, and it is but 5¼ miles from Carnarvon by road. We next ascend Moel Elio, on the south slope of which, above Llyn Cwellyn, we have a fine development of massive slate rock. About 1¼ mile to the right are large lodes of red iron ore of good percentage, which have been partially worked, but not to profit, owing to expense of cartage to Carnarvon. We now proceed south-east by Llyn Cwellyn, and the Snowdon range, to Beddgelert, five miles; thence to Rhiwbriwdir, Glan-y-Pwll, &c., six miles, leaving Moelwyn, at the fourth mile, two miles to the right. Three miles south is Festiniog: this south-east run of slate is divided from the south-west (from Llyn Cwellyn to Criccieth) by the tract of low land extending from Nant Gwynant southward to Traethwaur and Portmadoc.

If now we start again from Llyn Cwellyn, crossing the river flowing thereout, towards Carnarvon, by the bridge at the Nant Mill, and go south-west, we come first, in about five miles, to Moel-y-Tryfan, on the south slope of which are some very good quarries, as Vron, Penyvorsedd, Dorothea, Pen-y-bryn, &c., and many others equally good, but, more the pity, neglected. Here there is abundance of room and great facility for opening some very fine quarries. The produce of most of these quarries is carried to Carnarvon by the Nantlle tramway, nine miles. I hear it is contemplated to make this into a locomotive line. This would be a great boon to the Nantlle district and the country through which the line passes. South of the Nantlle Lakes we find the Taldrws, Taw-yr-Allt, &c.; and in the older rocks, east of the slate range, are large deposits of manganese. Nine miles further south, *via* Llanllyfni and Dolbenmaen, bring us to Mynyd-ed-nyfed, one mile from Cricceth, at the top of Cardigan Bay.

We have thus traversed a run of slate ground 20 miles from north to south, averaging in width four miles, and of a thickness of 25,000 feet, or 4¾ miles, possessing great advantages for cheap production, the height of the hills above level rendering machinery for pumping or hauling unnecessary, and admitting of the fullest application of self-acting inclines, &c. There is abundant water-power for all purposes of sawing, planing, moulding, &c.; the country is healthy and picturesque; the slate rock is, comparatively speaking, inexhaustible, and the demand double the present supply, and likely to increase. Why, then, are Welsh slate quarries neglected?

Little Neston, March 4. THOMAS L. COTTINGHAM.

P.S. I shall forward to you next week remarks "On Effects and Causes."

THE SLATE TRADE.

SIR,—Permit me to say a word to your excellent correspondent, "Saxum." His remarks in your last Journal upon my recently-published pamphlet on this subject are given with great fairness; but permit me to assure him I felt it a matter of regret at the time that I could not give more information upon the subject. When I was last in North Wales I made every effort to obtain such information as might be useful to persons desiring to embark in property of this description; but we must bear in mind the Welsh are not a very communicative people, and all the large concerns are in the hands of private parties, from whom it is utterly impossible to obtain any reliable statistics. These persons may be said to have a monopoly of the trade: their policy is to keep as much as possible under their own sway not only everything connected with the management of those great concerns, which have grown up under a system not so scientific as might be expected where competitive talent is brought to bear upon them, but to have absolute sway also over the markets, and to fix prices at their own pleasure. However, light will find its way in time, and I fear not but public attention will be drawn to the subject, *as one of great profit*, which under judicious selection and management none can doubt. Capital, talent, and perseverance will do much towards improving many of the time-worn tactics of the Welsh, break down a monopoly that paralyses enterprise, increase the supply, and give a high reward to the adventurer who seeks employment for his capital in this branch of trade. Such are the increasing demands for slate of every description, that this subject must force itself upon the attention of men of business and capital, and the tempting profits offered will, no doubt, be the attracting medium that will lead to this result. At the same time, I quite agree with "Saxum," that great circumspection is required to avoid worthless schemes; and this is the great fear to be apprehended, as the public in general have no knowledge of these matters; therefore, they should look well to the parties who propose any company for this object—if they are good men of business, on whom reliance can be placed for a faithful discharge of their duties, and if they really have a good vein of slate to work upon.

I am very glad, Mr. Editor, to see this subject taken up by many of your correspondents. Connecting this with the large sale I have had for my pamphlet on "Slate Quarries as an Investment," a sale quite unexpected, I draw the conclusion that a large portion of the investing public are taking an interest in this question, the result of which I trust ere long will be seen and felt in the extension of the trade, by opening new quarries on a sound and judicious principle. This will be a great boon to the trading interest, and one highly remunerative to the speculators, if well managed. I have had several appeals from parties interested in this question to collect further information on this subject for public use; this it is my intention to do in a second edition, as soon as I can collect the materials; and if your excellent correspondent, "Saxum," will kindly lend me the powerful aid of his pen and judgment, or any other parties from whom I have been honoured by communications, I shall esteem it a favour.

5, Warnford-court, City. T. C. SMITH.

PATENTED PUDDLING FURNACES.

SIR,—There is seldom a week passes without some reference being made to patents taken out in connection with the puddling of iron. Having been a working puddler for 24 years, I have watched with much interest the progress and utility of these different so-called inventions, and the manner of their application, and I cannot think that they are half so valuable as the patentees would wish us to believe. If their inventions be really so useful, why do they not depend upon their merits for success, and not upon other people adopting them? It seems evident to me that scientific men and inventors of that class possess but little practical knowledge as regards the real merits of puddling, for the majority of these proposed patents consists in the use of some artificial composition, or in some other scheme, which all acquainted with puddling must know to be equally impracticable. During the above time I have seen various artificial fluxes experimented with, but they never, so far as my experience goes, have warranted their continued use. The great secret is to have the heat equally diffused, so as to effect the change with the same amount of temperature, otherwise even the same parcel or ball, however carefully the operation may have been performed, will be found to produce different qualities of iron. The majority of puddle-furnaces have too much of a concentrated action, which does away with the possibility of producing a reverberatory motion in the flame, on which depends all that is essential and necessary towards perfecting the operation of true puddling.

Scientific men are often at a loss to account for the deficiency of fibre, and for the large amount of obnoxious matter the puddle-bars still contain, hence they seek to improve it by artificial means, but forget to enquire, in the first place, whether the iron was properly melted, and in the next place, whether the flame or the heat was of that character to enable the iron to form a fibre. I hope, if scientific men wish for any real improvement, they will watch the question of heat a little closer, as I am satisfied that there is no artificial contrivance that will produce fibre, or so readily rid iron of sulphur and other obnoxious matter as the elements could, when properly directed through the interior of the puddle-furnace. Again, we are not informed that Cort ever employed these artificial means. In conclusion, I beg to call on all men of my avocation, and others who are conversant with this branch, to unite together, and as there are Mechanics' Institutes and Institutes of Engineers, I would beg to propose an Institute of Intelligent Puddlers, so that we may raise our name and character. As there are myriads at the present moment dependent on our skill and intelligence, let us prove that we are really so, by showing to the world that we deserve better treatment than we receive. B. R.

NORTH TRESKERBY MINE.

SIR,—I have observed for many years that the man who forms a company for working a mine, and in which he holds an agency, is almost the first man to receive a dismissal. Mr. Webb, the late purser of North Treskerby, if I am correctly informed, took a deal of trouble, and devoted much time, in the constitution of a company for working that mine; and after the mine has been brought into notice by good discoveries, the purser is dismissed: and what for? Is there any serious charge against him, has he done wrong? Not at all, nothing is proved; and as to the matters which appeared to require explanation, they are disposed of without the slightest taint against the character of Mr. Webb; and this fact, I understand, the new purser has certified in writing. In the Journal of last week it is reported that "Mr. Thomas Nicholls proposed that the services of the purser be dispensed with;" and that then "a long and animated discussion took place as to the desirability of appointing another purser, or whether they should appoint a committee, with a clerk," &c. Then followed the nominations of Mr. B. Matthews and of Mr. R. H. Pike to the office of purser, and the election of the former. Now, I should like to know the *real reason* for the removal of Mr. Webb. Was it not to make room for a man of the choice of the Redruth party? The allegation that the books were kept in a "loose manner," is simply untrue. Mr. Webb has been a mining book-keeper longer than his successor, and knows as much about books in general as he does. I regret to state that Mr. Webb feels the unkindness of his expulsion so acutely (being a very sensitive man) as to make him very ill; but he has the sympathy of a large circle of friends, who will stand by him, and who assure him that he shall lose nothing by his rejection. I write this without Mr. Webb's knowledge, and whether he would approve of it or otherwise I cannot say; but my annoyance at his expulsion, *without sufficient reason*, impels me to write.—*Redruth, March 5.* J. J.

WHEAL MARGARET.

SIR,—As one of the adventurers in this mine, I shall not be suspected of wishing to depreciate its value. It may rather tend to their advantage if attention is drawn to its anomalous state, as disclosed from time to time by the printed reports from the managers and purser. Not very long since the quarterly dividend dropped from 5*l.* to 2*l.* per share; and the reason assigned in the report was that four pitches on the Foul lode were unexpectedly closed by the walls of the lode suddenly closing and burying upwards of 30 tons of broken tinstuff, but the adventurers were assured that the bulk of this would speedily be recovered. Not unnaturally, perhaps, the adventurers looked for some further mention of this occurrence in the next succeeding report; but herein they were disappointed, and the dividend dropped again from 2*l.* to 1*l.* 15s., although, so far as the report disclosed, the levels were all looking well; and it is significant that on this occasion the quantity of tin sold was not stated. Since then the mine has further receded; from 1*l.* 15s. the dividend fell to 1*l.* 10s., and then to 1*l.* In November last a dividend of 1*l.* only was declared, but the shareholders were assured that but for an accident to one of the steam-whims the returns would have been more extensive, and they were at the same time informed that the lode in the 110, east of Harris's winze (Foul lode), was worth from 50*l.* to 60*l.* per fathom, and that there alone "during the last three weeks from 8000*l.* to 9000*l.* worth of ore had been laid open." This encouraging announcement was quickly followed by a special circular to the adventurers, stating that the Foul lode in the 120 had been opened into, and that it was very like the one above mentioned in the 110, and valued also at from 50*l.* to 60*l.* per fathom.

Well, Sir, it may have been expected that the next returns would show some tangible profits; something even in addition to the deferred realisation of that which (if the former report was correct) would, but for the accident to the steam-whim, have been

realised during the previous quarter. But here again they are disappointed; accident succeeds accident; large discoveries of tin, and even improved lodes in almost every part of the mine, result in diminished dividends. Apologies are again offered "for the complexion given to the accounts, so different from that contemplated at the last meeting." It is not surprising that the shares have lately fallen in value 20 per cent. Those who have a pecuniary stake in the enterprise may cudgel their brains to penetrate the secrets of its management, and to reconcile the sequence of a generally improved state of the mine and falling dividends. Will any one of your correspondents turn a powerful "bull's-eye" on this mine?—*Taunton, March 4.* T. N. L.

Meetings of Mining Companies.

ST. JOHN'S UNITED COPPER AND LEAD MINING COMPANY, NEWFOUNDLAND.

The first annual general meeting of shareholders was held at the company's offices, No. 18, Cannon-street, on Thursday,—Mr. C. P. BERKELEY in the chair.

The report of the directors stated that by the judicious placement of some of the shareholders' acceptances they had reduced the liabilities of the company to something under 500*l.*, and they still held acceptances which they considered good amounting to 1450*l.* It might be proper to state that most of the shares for which acceptances had been given were still in the company's safe. Agreeable to the resolution passed at the last meeting —"That the amended offer of the vendors for the purchase of the property and mines at Turk's Head and English Ridge should be accepted," and which they, in a liberal spirit, had reduced to 16,000 in lieu of 20,000 shares, the directors had only to state that the necessary papers and documents were being placed into the hands of the company's solicitors for the immediate transfer of the said property. That 1000*l.* out of the 1450*l.* good bills being overdue, and the balance having still three months' time to run, the directors were entirely without the funds necessary to enforce payment of such overdue bills, and were also unable to take such steps for the future effective operations as are absolutely necessary for the well-doing of the company. The directors, therefore, saw no other course open but to make a call of 1s. 6d. per share.

The CHAIRMAN said that by the company's Articles of Association it was required that the annual general meeting of shareholders should not be held later than March 7, and, therefore, in conformity with those articles, this meeting had been convened. Since the last meeting Mr. Adron had prepared a statement of the assets and liabilities of the company, a copy of which was lying upon the table, and he (the Chairman) had also prepared a similar statement, showing the financial position of the company up to the present time. As stated in the report, the liabilities had been reduced to about 454*l.*, as near as could be made out. They had, in conformity with the terms of the resolution passed at the last meeting, given directions for the conveyance of the Turk's Head and English Ridge property to the company. There were other properties of considerable value which were offered to the company either for a certain number of shares or upon a royalty. As he had before said, the liabilities of the company amounted, in round numbers, to 500*l.*, and as funds were required to enable them not only to carry on the company's operations, but to afford them the means of proceeding with the actions to recover upon some of the bills, is was for shareholders to determine what course should be adopted. He frankly told them the position in which the company was placed, and it was for shareholders to decide. He did not know a great deal about mining in Newfoundland, but he was free to confess that he had the greatest confidence in the statements of Mr. Gisborne, and he thought if his proposals were accepted that the company might be brought to a successful issue. Of course, it remained to be seen whether the shareholders would embark the required capital; but if they did, he believed that in twelve months hence they would be in a position to pay a dividend—that was his earnest and honest opinion. There was another point to which he wished to call particular attention, which was that the board had received from Mr. Ridge his resignation as secretary, which they immediately accepted.

Capt. COTERELL enquired when that resignation was received?

The CHAIRMAN replied on the 1st of March. They had not yet appointed another secretary, for, indeed, the business of the company had for some time past been conducted by Mr. Jones, who had undertaken the office of secretary *pro tem.* As when they appointed another secretary he thought they would not give him more than 120*l.* per annum, the London expenses would not be great; and as, according to Mr. Gisborne's statements, they would have during the coming summer shipments of ore, they would be put into a position to carry out the undertaking effectively. He concluded by moving the adoption of the report.

Mr. PULFORD could not but designate the report of the directors as an impudent document, for it coolly stated that there were certain bills which had been accepted in lieu of cash for shares, which the board kindly kept locked up in the safe, and yet, at the same time, they ask those who had already paid cash for their shares for more money. He must confess that to him it appeared utterly inexplicable why the directors should ask for money when there were very large bills outstanding.

The CHAIRMAN said those parties who had given the bills must pay them, and, no doubt, would do so.

Mr. GISBORNE reminded the hon. proprietors that the bills referred to were not yet due, and that funds were required to enforce the payment of some of them.

The CHAIRMAN said that proceedings had been commenced against some of the parties, but, being without funds, the actions were discontinued.

Mr. HUGHES enquired why the ore had not been sold?

Mr. GISBORNE believed that the ore was now on its way to Liverpool, but it was to be recollected that when the sale did take place the money would not be received for at least six or eight weeks after.

Mr. HUGHES was sure that the whole of the difficulties into which that company had been brought arose from bills having been taken in lieu of cash for shares.

Mr. PULFORD asked how was he to know that if he again paid cash for his calls but that some others would only give bills?

Mr. JONES, one of the newly-appointed directors, assured the hon. proprietor that so long as he retained a seat at the board no such an irregularity would be permitted.

Mr. HUGHES was of opinion that the feeling of the shareholders was decidedly against the company continuing; and he, therefore, begged leave to move as an amendment "That the present position of the company, its total want of funds, and the ill-repute which attaches to it from the way in which its business has been transacted, renders it desirable that immediate steps should be taken for winding-up its affairs."

Mr. ECCIUS seconded the amendment.

Mr. GISBORNE, jun., in answer to a remark, stated that the proposition with regard to the Trump Island property was that the company should become possessed of it for shares, or a royalty, and if the company were wound-up he knew, from what had already passed, that a very large proportion of the shareholders would at once join with him in the development of the property, which there could be no doubt would be attended with the utmost success. He would take upon himself, on behalf of the owners of the property, to say that they would be exceedingly sorry to receive any benefit from what had been done in Newfoundland by the company's capital without offering to the present shareholders the option of participating in those benefits. If it were decided that the present company should cease, he would be very glad to co-operate with any of the shareholders in the formation of a new company upon a similar basis.

The amendment was then put, and, upon a show of hands being taken, it was declared lost, when the original resolution was affirmed.

Upon which Mr. PULFORD handed in a protest, when

The CHAIRMAN said that the business of the meeting being to receive the directors' report, and to re-elect the retiring directors, it was not competent for him to entertain any other subject, and, therefore, declined to accept the protest submitted.

Mr. PULFORD thought that as the document protested against the whole of the proceedings, it was *de facto* the business of the meeting, and considered the Chairman to be acting very irregularly in refusing to accept it.

The CHAIRMAN said if he had acted wrong he was perfectly prepared to stand by it.

Mr. HUGHES then stated that he was requested by four shareholders to demand a poll, and accordingly handed in a requisition to that effect.

After some conversation, it was arranged that the poll should be taken on Thursday next, between twelve and two o'clock.

Mr. Jones having been re-elected director, the proceedings terminated.

SOUTH LADY BERTHA MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Moorgate-street, on Tuesday, Mr. BRIGGS in the chair.

Mr. T. FULLER (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed. The accounts showed—

Mine cost, to Sept	£4843	11	10		
Oct. cost	188	8	9		
Nov. ditto	179	17	11		
Dec. ditto	80	11	1		
Rent of water to Christmas	31	5	0=	£5323	14 7
Capital account	£4066	10	8		
Copper ore sold and carriage	267	14	6		
Calls received	438	14	11		
Proceeds of sale of forfeited shares	112	8	3=	4885	8 4
Balance (debit)				£438	6 3

The liabilities exceeded the assets by 238*l.*

The following report was then read:—

March 1.—I beg to hand you a few particulars of this property, commencing with the engine-shaft on the north lode. This shaft is sunk to the 40 fm. level, where a cross-cut northward of about 6 fms. to cut the lode. It may be necessary here to remark that the shaft is a perpendicular one; it intersected the lode in its downward course in the 30 fm. level. The lode underlying north accounts for the cross-cut north of 6 fms. to cut it, as before explained; the drivage was then continued on the course of the lode eastward to the first cross-course, and then to the main cross-course, on the course of which Williams's cross-cut has been extended south about 100 fms., and cut the south lode, which being so much disordered by the cross-course, I cannot say that it is well defined, although when first cut it produced spar, mundic, and spots of copper ore. I would here remark that from having but one engine-shaft, which affords the only communication to the surface from the underground workings, the ventilation is extremely bad, and we cannot work this lode to any advantage. I would beg to recommend, therefore, that we for a time suspend all operations on this lode at the 40, and sink on the course thereof from the surface to the 40, and communicate it to William's cross-cut; by so doing we shall get good ventilation for all our workings both on this and the north lode, and also shall be proving the south lode every foot we sink, and should it prove of value we can drive any levels we please at the most promising points. From the fact of the south lode being found at such a distance—100 fms. from the main lode at the 40, and consequent bad ventilation, &c., I am of opinion we shall do well to secure the cross-cut, and keep it as a means of communication with a shaft on the south lode, rather than to consider it as a means of being able to prove this lode at the 40, which will be very troublesome and costly, and as there should be more ground added to the sett on the course of this lode, I am of opinion that we might more advantageously confine our operations to the prosecution of the north lode by sinking the shaft thereon, and extension of the 30 and 40 fm. levels.—North Lode: The 40 has been driven altogether east of William's cross-cut about 63 fathoms; the first 30 fms. driven the lode was in places of good size, producing good stones of ore occasionally; the last 30 fms. driven the lode has improved, and in places is worth from 1½ to 3 tons of copper ore per fm.—a very strong lode. In the present end of this level the lode is from 2 to 8 ft. wide, composed of capel, mundic and good spots of ore—a very promising lode. Just behind the end, 10 fathoms east and west of Leaman's rise, the lode contains copper ore in paying quantities, being worth in places from 1½ to 3 tons of copper ore per fm., and the price for stoping 2*l.* 15s. per fm. The lode in the stopes east of Leaman's rise is worth from 2 to 2½ tons of copper ore per fathom. We intend putting up a rise in the back of this level, for communication with the 30 fm. level above, which will further increase the ventilation, and in all probability open out another piece of ore ground. In the 30 east the lode is small and poor; this end, however, will be forced on, and when far enough advanced communicated with the proposed rise in back of the 40, just alluded to. In alluding again to the 40, I beg to say that we have driven a cross-cut north (Jeffery's cross-cut) just at Hodge's winze (which will be shown on plans), for the intersection of the north part of the lode, for proving if the ore ground in the 30, at the big cross-course, held down; we have not as yet met with it, but hope to do so as we extend this drivage. We have commenced to rise in back of the 40, behind the shaft, on the course of the lode, for the purpose of breaking the angle at the 30, which will enable us to sink this shaft on the course of the lode, thereby proving it as we sink, and facilitate the progress in reaching the ore ground gone down in the 40. We have full 50 tons of ore at surface, a portion of which we hope to get in time for this sampling, and should we be able to get in the whole we will do so. I will give due consideration to the erection of a crusher, &c. I find it impossible to finish up the plans in time for the meeting, having been at the mine two days this week dialling, levelling, &c. You can assure the meeting, however, that the plans are in a forward state, and will soon be sent on. I enclose a rough section of the workings, which will, before the plans arrive, give some idea of the workings.—JOSEPH RICHARDS.

The CHAIRMAN having moved the adoption of the report and accounts,

The SECRETARY, in answer to questions, stated that the most important point to be considered was the sinking of the main shaft from the 40 to the 50, there being about 300 tons of ore opened in the 40, and much improved in value going down. In the 50 a large quantity of ore ground would be opened, and taken away to advantage. The course of ore in the 40 extended for 15 fms. in length. The south lode presented unusual prospects of success, and would be sunk upon with all possible speed.

Dr. NELSON suggested that their expenses should be reduced to the lowest possible limit, until the real value of the mine had been tested.

The SECRETARY said that Capt. Richards recommended the sinking of the main shaft.

Mr. JONES said there could be no doubt that the recommendation of Capt. Richards was a very proper one, for depth was all that was wanted.

The SECRETARY said that it was estimated that it would cost about 6*l.* per fm. to sink upon the south lode. From the 40 they would sink on the course of the lode, whence they believed enough ore would be produced to pay the cost.

After some further discussion, the report and accounts were adopted, and a call of 2s. 6d. per share was made.

The committee being re-elected, a vote of thanks to the Chairman was passed, when the proceedings terminated.

CARDIGANSHIRE CONSOLIDATED MINING COMPANY.

The annual general meeting of proprietors was held at the company's offices, Bishopsgate-street Within, on Monday,—Mr. J. H. MURCHISON, F.G.S., in the chair.

The notice convening the meeting having been read, the minutes of the last were read and confirmed. A statement of accounts was submitted, showing a balance of liabilities over assets of 165*l.* 6s. The following report was then read:—

Feb. 27.—Since the last annual meeting Bog shaft has been sunk from the 10 to the 30 fm. level below adit, on the north part of the lode. The shaft has been cased and divided for the machine kibble to work in it. The 10 east has been extended 13 fathoms, through a lode yielding good stones of lead and copper ore occasionally. In consequence of not being able to draw the stuff during the severe frost, nothing has been done in this end for the present month. The lode in the end is poor at present, but as there are a great many fathoms of ground stoped away above the adit, about 20 fms. further east, I think this level ought to be driven a few fathoms further, to see if anything better can be met with; the stuff will be all cleared out in the course of a few days, after which the driving may be resumed. The 10 west has been extended about 5 fms.; cross-cuts have been driven north and south from it, but nothing has been met with. The lode in the end is spotted with lead and copper ores, but not sufficient to value as yet. The 20 east has been driven 29 fms., which has yielded good stones of lead and copper ores occasionally, but for the greatest part it has been poor. The 20 west has been driven 36 fms.; 6 fms. of it passed through a good lode of copper ore, from which a great many fathoms have been stoped away, yielding on an average ⅛ ton per fathom; this stope is now to within 2 fms. of the bottom of the 10; the ore is getting shorter as we go up, yielding at present ⅛ ton per fathom for 2 fms. in length. About 5 fms. west of this stope, in the 20, a good lode of lead was met with, about 3 fms. long, at which point we are now stoping the back and sinking a winze in the bottom of the level; the stope is about 4 fms. above the level, but the lode is not so good as it was, the yield being at present 5 cwts. per fathom. The winze is 4 fms. deep, with a good lode in each end of it, which will yield 1 ton of lead ore per fathom, but as the ore appears to be dipping west, I expect the winze will pass through it before reaching the 30; if so, the 30 will go beyond the winze before meeting with the ore. West of this winze the 20 passed through 4 or 5 fms. of lode again, which will yield 5 or 6 cwts. per fathom; the end is poor at present, but I expect an improvement shortly. The 30 east has been driven 6 fms. through unsettled ground, with stones of ore occasionally, but nothing to value; the end is still in the same kind of ground. The 30 west has been driven 17 fathoms, which has yielded ore, more or less, for nearly the whole length; some part of it will pay for stoping away. The lode in the end is hove at present by a cross channel of ground, but after we get through it, and find the lode settled again, I expect to meet with a good lode of ore. This end is now about 5 fms. from being under the winze sinking under the 20, which I expect to get communicated to the level in about two months. A great many fathoms of ground have been stoped away between the 10 and the 20 fm. levels, yielding on an average ⅛ ton of ore per fathom. A cross-cut has been driven south from the 10 east 7 fms., and another cross-cut in the 20, near the shaft, 6 fms. 2 ft., but nothing has been met with in either of them. A drawing machine has been put up for drawing the stuff, which is answering very well, and by which a great saving has been effected. The work being carried on at present is driving the 30 east by two men, at 4*l.* 10s. per fathom; driving the 30 west by six men, at 5*l.* 10s. per fathom; driving the 20 west by four men, at 7*l.* 10s. per fathom. Sinking winze in the bottom of the 20 west by six men, at 9*l.* per fathom; rising and stoping in back of same level over the winze by four men, at 6*l.* per fathom for rising and 3*l.* per fathom for stoping; stoping above same level, in copper stope, by four men, at 3*l.* per fathom; stoping bottom of the 10 west by four men, at 3*l.* per fathom; the lode in this level will yield about ⅛ ton of ore per fathom; and driving the 10 west by four men, at 6*l.* per fathom. As soon as the winze is holed to the 30, to ventilate that part of the mine, I would propose to sink Bog shaft again at once, and as the best of the ore ground, as far as opened out, is to the west of this shaft, and also dipping west, I would beg to call your attention again to what I proposed to be done at the last annual meeting—to sink a shaft below the old workings, by the quarry, about 75 fms. west of Bog shaft, where I am of opinion a good mine will be opened out; and also drive east from the adit, east of Bog shaft, to get under the copper which we discovered some time since near the surface. This being in new ground altogether, and further east than any of the former workings, I think it well worthy of a trial. At the last annual meeting I calculated the returns to be from 12 to 15 tons of ore monthly, and I am glad to say, although no discovery of importance has been met with, the returns for the 12 months have been 100 tons of lead and 37 tons good quality copper ore. The lode in this part of the mine is so changable that it is impossible to calculate what quantity can be returned for the next 12 months. Sometimes we can raise more ore in one week than we can at other times raise in one month; but, according to the present prospects, we may calculate upon returning about the same quantity, and if any new discovery can be met with the returns will be increased. The machinery is all in good working order, and calculated to work the mine to a much greater depth. With the number of hands now employed the cost will be about 220*l.* monthly, and to sink Bog and Quarry shafts, to drive east on the copper lode, and to extend the different levels to open out the mine in a miner-like manner, to give it a fair trial, the cost would be from 250*l.* to 300*l.* per month. As to the general prospects, I think they are encouraging, considering the time this part of the mine has been working, the returns made, and the ore ground being longer and better in the 20 than it was in the 10, and if it continues to lengthen in the deeper levels, which it is looking very likely to do, I have no doubt but ere long a good mine will be opened out, and that before the next annual meeting it will be in a position to pay costs.—JAMES SANDERS.

The CHAIRMAN then read a report from Mr. Davies, manager of the Rhoswydol and other mines in the neighbourhood. Mr. Davies attached the greatest importance to the fact that the shoot of ore was found to lengthen as depth was attained, the bottom level being certainly the most promising of all the levels. He preferred the appearance of the stratum in that level to that in any of the upper ones. He considered depth was required, and he looked forward with the greatest interest to the result that would be secured in the 40 and 50 fm. levels. The machinery was in efficient condition, and fully equal to carrying out a much larger scale of operations than that at present being prosecuted.

Mr. BARNEWELL, who had been a shareholder in the old company, considered the statement, which had been so fully verified, that the shoot of ore lengthened and improved in depth, one which could but be highly encouraging.

The CHAIRMAN said, if it were found that the shoot of ore lengthened in the deeper levels, of which there appeared to be little doubt, they might reckon on soon at least paying cost. During the last 18 months their chief object had been to push down the shaft (now 30 fms. below the adit), so as to be able to open out levels on the course of the lode, in doing which they were much more likely to make discoveries than in sinking a shaft. It was only about 18 months since the lode had been cut at 10 fms. under adit, and since then they had not only reached the 30 fm. level, and driven a few fathoms at that depth, but in the same period they had sold nearly 2500*l.* worth of ores, mostly from this part of the mine, which must be considered favourable, looking at the very limited extent of ground yet opened. This part of the mine was on the same lode, but a long distance east of the workings from which such large returns were formerly obtained, and which had made this mine so celebrated. It was, therefore, all in whole ground to a very great extent, and they might reasonably hope that, in concentrating their expenditure to this part for the present, they might open out a mine rich enough to pay dividends, and also afford the means of developing the old mine deeper, it being also only 30 fms. below the adit. He might further mention that the lode was one of extraordinary size, varying up to 60 ft. wide, so that the mere driving a level a few feet wide did not really prove its value, which could be done by tributers, when there was room for them to work. The last company never drained the water from the 30 fm. level of the old mine, and scarcely drove at all in any of the levels, and yet in about three years sold about 20,000*l.* worth of lead ore, almost entirely obtained from cutting down the sides of the old levels, and following the branches going off from the sides. The Chairman concluded by remarking that he considered the Quarry shaft ought to be sunk at once; it was about 75 fms. west of the Bog shaft, and he believed some good ore had been found in it, though sunk only a few fathoms from surface.

A SHAREHOLDER enquired to what period of time the company's lease extended?

The CHAIRMAN said that the present lease was for a period of 30 years, about six or seven of which had expired. The company also had an agreement on behalf of the lord to renew the lease upon the same terms for a similar period.

Mr. BARNEWELL, when upon the mine, had been told by a practical agent that the lode ran the whole distance between the old and the new mine, and could be traced upon the surface; and he suggested that the whole of that ground should be explored.

The CHAIRMAN said they were already driving in that direction.

Mr. BARNEWELL considered it of the utmost importance that the ground should be tested between these two points from the surface, for it was quite likely they would find there a similar deposit of ore to that which had produced such large returns.

The CHAIRMAN said their operations had lately been chiefly directed to the sinking of the Bog shaft, but now that the levels were being extended there were, of course, much greater chances of making discoveries.

Mr. PITTAR stated that he had seen Mr. Davies, since he inspected the mine, when he stated that he considered the shares well worth 7*l.* to 9*l.* each, founded on the merits and prospects of the mine itself.

Mr. BARNEWELL had an impression that the whole of their affairs had been much mismanaged by the last company; for although they had a large mine, and they knew that a great quantity of ore had been left by the preceding workers, the shaft was never drained to the bottom, though only 30 fms., but notwithstanding that, upwards of 20,000*l.* worth of ore had been sold. Some of the stopes were worth several tons of ore per fm. The lode was of immense size, and he believed it had been seen 80 feet wide, with ore all through.

The CHAIRMAN said that their purser, Mr. Paull, who held a considerable interest in the undertaking, recommended the sinking of the Quarry shaft, leaving Bog shaft for future consideration, when the levels were driven further. It was an important fact that a fine lode had been discovered in the Quarry shaft. He believed their lode was the same as that in Dyliffe Mine, which was returning 100 tons of lead ore per month.

The report and accounts having been unanimously adopted, the board of directors were re-elected, Mr. P. M. Sharp (of Hancock and Sharp) being added thereto, and Mr. C. Eley was re-appointed auditor.

A vote of thanks to the Chairman having been passed,

The CHAIRMAN, in acknowledgment, thanked the meeting for the compliment paid him, and suggested the desirability of shareholders visiting the property, by which they would be able to form an opinion as to the importance of the undertaking and the prospects it presented, and, at the same time, would be the means of greatly increasing confidence in the carrying out of the operations. It must be satisfactory to know that the value of the mine considerably improved in depth, and there was every reason to believe that when fully developed the mine would become remunerative.

The proceedings then terminated.

DRAKE WALLS MINING COMPANY.

An ordinary meeting of shareholders was held at the company's offices, Great Winchester-street, Old Broad-street, on Tuesday,—Mr. W. BETTELEY in the chair.

Mr. H. WILLIAMS (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed.

The accounts for the three months ending Dec. showed—

Balance last audit	£ 286	1	1		
Ore sold	3707	14	11=	£3993	16 0
Mine cost, merchants' bills, &c.	£3584	3	3		
Stores on hand	35	12	1		
Extra disbursements	13	18	4=	3633	13 8
Leaving credit balance				£ 360	2 4

The report of the agent was read, as follows:—

March 2.—We have extended the 102, east of Matthews's shaft, 7 fms. 2 ft. 6 in., the branches in which have produced saving work for tin, with occasional stones of copper ore; within the last 2 fms. the branches have improved, and will now produce 10*l.* worth of tin per fathom. We are now nearly up to the point from which the 92 has been profitably productive for a great length. In order to lay open this tin ground with good dispatch, we are putting up a rise in the back of this level, which will be continued to meet a winze sinking in the bottom of the 92; the branches at each of those points are producing tolerable good work for tin. The 92, east of Matthews's, has been extended 11 fms. 1 ft. 3 in. in tin ground worth about 8*l.* per fm. The 80 fm. level east has been extended 3 fms. 1 ft. 9 in., in tin ground worth about 6*l.* per fm. The Tye level, east of Matthews's shaft, has been driven 3 fms. 4 ft., so as to enable us to sink a winze therefrom, which is in full course of sinking by nine men; present depth 4 fms. 5 ft. 6 in.; there remain about 6½ fms. more to sink to reach the 40 stopes, and when a communication is effected we shall be in a position to work a great extent of profitable tin ground at the 40 fm. level. The 80, west of Betteley's shaft, has been extended 11 fms. 0 ft. 7 in.; the branches in which are producing good stones of tin, and promising for a speedy improvement. We are nearly up to a cross-course, and to the west of which there has been a great length of profitable tin ground in the level above. Harris's winze has been sunk below the 70 7 fms. 1 ft. 6 in., within the past two months. We expect to communicate this winze with the 80 within a few days; this will enable us to open up stope ground in the direction of machine shaft.—Brenton's Shaft: The 70, west of Brenton's, has been driven 6 fms. 2 ft. 3 in. in good tin ground; in addition to which we have recently discovered a good branch of copper ore, varying in size from 2 to 5 in. wide; samples of the same are forwarded to you; the end is now letting down a great increase of water, and the lode increasing in size (now 20 in. wide); this is the most western end of the mine, all in new ground, and to which we attach great importance. We have yet 220 fms. to the western boundary; about 70 fms. west of the present end one of our north lodes will, according to the usual bearing, form a junction with our tin lode; the indications, therefore, are favourable for a large deposit of mineral. We have resumed the 60, west of Brenton's, and put out a short cross-cut south, where we have intersected the main, or most productive tin branches, worth about 10*l.* per fm. In the 40, west of Brenton's, we have commenced a stope by eight men, in profitable tin ground. The 70, west of cross-cut, on the north lode, has been extended 7 fms. 1 ft. 3 in. during the past week. We have taken down the lode, which is from 2 to 3 ft. wide, composed of quartz, capel, mundic, and good stones of copper ore, not quite sufficient to value, samples of which we have forwarded you. The ground has materially improved, and letting out more water; price for driving, 6*l.* per fm., tramming included. We are pushing on west towards the main cross-course, in the direction of which we may fairly presume a good discovery will be made. The western part of the mine is now becoming available for stopes, while active tutwork operations have been required for the proper development of this part of the mine; and with a continuance of the late improvements we may fairly calculate on increased quantities of tin. Our returns of tin are increasing, and promising for a further increase, notwithstanding the severe weather has been much against us. The working costs of the mine have been reduced to the lowest possible scale consistent with the proper development of the different tutwork operations, and in order to push on the same, since the offer of a renewal of your lease, we have had 30 men employed on unproductive tutwork, otherwise we should have made more profits in the past quarter. In addition to the working costs of the mine for the past quarter, 150*l.* has been charged for new plunger-lift and necessary pitwork fixed in the 92, at Betteley's shaft, which keep the mine effectually drained throughout. A new crusher has been put in at Matthews's engine, which is working very satisfactorily indeed, and the machinery throughout the mine is in a very good state of repair. There are 350 persons employed in and throughout the mine.—T. GREGORY, J. HOSKIN.

The CHAIRMAN having moved the adoption of the report and accounts, Mr. E. BETTELEY (the purser) stated that the winze from the 70 to the 80, west of Betteley's shaft, had been completed, so that the men who had been engaged for some time upon dead work would now be employed in stoping the ground; and the other winze would be completed in about eight or nine weeks, when there would also be a certain amount of stoping ground that would come away to a profit. Their operations had, in common with other mines, been seriously impeded by the frost; but they anticipated the sampling would amount to 16 tons next month, and to 20 tons the month following. Already they had a very long extent of ore ground opened, and were still opening much more than was being taken away.

Mr. SOLLY enquired if anything further had been ascertained about the copper?

Mr. BETTELEY replied that they had been driving on the north lode, where the ground had so far improved as to be reduced in cost for development from 9*l.* to 6*l.* per fm., and it remained to be seen what would be produced as they approached the cross-course further west. Upon the whole, their prospects, he considered, were very much improved, especially in the western part of the mine.

The SECRETARY, in answer to a question, replied that the whole of the liabilities up to the end of December were included.

Mr. DUNSFORD took objection to the placing the stock account as an asset, it being contrary to the plan adopted in well-ordered statements, and at the same time created a fictitious balance. It was true that it did not actually make the account wrong, but it encumbered it with items that were utterly useless, and calculated to mislead shareholders who were unacquainted with mining accounts. As a shareholder, he personally objected to the stock account being included as an asset, and although he did not intend to move a resolution upon the point, he suggested that it should for the future be omitted.

Mr. HODGSON, although very unwilling to differ from Mr. Dunsford, admitted the stock account was, to an extent, a fallacy, yet he must confess that he preferred that fallacy rather than running the risk of "cooking" the accounts.

Mr. DUNSFORD could not see in what way the insertion of the stock account as an asset could possibly be the salutary check which Mr. Hodgson had suggested.

Mr. BETTELEY said that the stock account was really the value of the materials upon the mine. Every store at the end of each month was weighed in his presence, when he took an account of it. It was really an account of the tangible stock in hand on Dec. 31.

Mr. DUNSFORD admitted that it was an asset; but, at the same time, it was not an asset that ought to be included in the available balance brought down.

Mr. M'CALLAN thought the suggestion put forward by Mr. Dunsford was a very valuable one, and should be carried out.

The report and accounts were then adopted, when Messrs. Betteley, Gill, Bayly, Tyrie, and Dunsford were elected the committee of management.

A vote of thanks to the Chairman terminated the proceedings.

GREAT WHEAL VOR UNITED MINING COMPANY.

A special general meeting of proprietors was held at the company's offices, Gresham House, on Tuesday, Mr. G. NOAKES in the chair.

Mr. J. TRUHAN having read the notice convening the meeting, the CHAIRMAN said: Gentlemen, I will read you our report, without making any preface:—

The committee have convened the present meeting specially and solely for the purposes referred to in the notice convening the meeting, and pursuant to the request contained in the eighth resolution of the quarterly general meeting, held on Dec. 19, 1860. Your committee have carefully considered how far it might be practicable to effect a reduction in the present denomination of the shares without reducing the aliquot interest of each holder, so that the mine may be held hereafter in 5908 in lieu of 23,632 parts or shares. As the present number of shares is divisable by four, it is manifest the reduction contemplated by the resolution of the last quarterly general meeting is practicable if desired by the shareholders, but as some of the shareholders hold such number of shares as would not be divisable by four, it is also manifest that, in the event of such reduction, fractional parts of shares must remain. But your committee are of opinion that there would not be much, if any, inconvenience in this, as those shares could be represented by half shares and quarter shares of the new denomination, and after a time, by sales and transfers, it is probable that these fractional parts would be absorbed into whole shares. Any change would at first involve some little difficulty in keeping the share list, but not any serious importance, and in no case would the actual aliquot interest of any shareholder be interferred with or reduced; he would hold precisely the same interest after the reduction in the new denomination of shares as he holds at present; thus, the holder of six shares at present would hold one and a half of the new denomination, but precisely the same aliquot interest in the mine as he holds now. The reduction has been repeatedly urged upon your committee by many holders of shares in the mines as a measure of importance to the interests of all the shareholders, and, after a careful consideration of the matter, the committee leave it in the hands of the shareholders, expressing only their opinion that the change would be advantageous to the property, and that it might now be effected without any practical inconvenience.

The committee would now draw attention to the next special object for which the meeting is convened—the position of the company with regard to the Carleen sett. The shareholders are aware that for some time past operations have been suspended upon the Carleen sett, held by a grant from Mr. Charles Trelawny. An engine was erected upon the sett, pursuant to the covenants in the deed, and it still remains upon it. Mr. Trelawly has hitherto allowed the sett to remain in abeyance, to enable the committee and adventurers to avoid the cost of working it, and to give them time to consider and decide whether or no they would determine upon the outlay of funds necessary to explore the ground. But Mr. Trelawny has now, through his solicitors, in a letter that will be read to you, called upon you either to work that sett effectually or to resign it, and has intimated his intention, in default of your working it, to put an end to and to determine the grant. The time has, therefore, arrived when the matter can no longer remain in abeyance, and your committee have deemed it right to call your special attention to it, and, as on a previous occasion, to ask your directions for their guidance in reference thereto.

As the ordinary quarterly general meeting will be held on the 28th inst. it is unnecessary at this meeting to enter upon the subject of the quarterly account, but your committee have much pleasure in stating that the accounts will probably show a balance in favour of the mine, such as they think may justify you in declaring a small dividend out of the profits of the actual working and returns of mineral should you think fit to do so at that meeting.

The CHAIRMAN continued: That, Gentlemen, is the report of the committee submitted for consideration. With respect to the reduction of the number of shares, the committee are prepared with a resolution upon that point, but it remains to be seen if the shareholders approve of it or otherwise; and in order that the question may be freely ventilated by the opinion of shareholders being expressed upon it, I will at once read the resolution. It is to the effect—"That the present denomination of shares be reduced to a denomination equal to one-fourth of the present denomination, so that the mines shall be hereafter held in 5908th parts or shares, in lieu of 23,632 parts or shares, each shareholder, nevertheless, to hold an aliquot interest in the reduced denomination of shares equal to his pre-

sent aliquot interest; that in any case in which the actual number of shares now held by any shareholder is not divisible by four, such shareholder shall be entitled to fractional parts of a share, either one-half or one-quarter, as the case may be. Each shall be represented upon the share list, and may be transferred until the same can be consolidated into whole shares by transfer or devolution, as may be, from time to time."

Mr. HARVEY: I am of opinion, Mr. Chairman, that it is very desirable the denomination should be reduced.

Mr. DOCKER: I think that no shareholder, viewing the question in all its bearings, can see any let or hindrance to the proposition being carried out; and I cannot see why the amount quoted in the *Mining Journal* as paid upon what now may be called the old stock should not be struck out, and in its stead Wheal Metal inserted, with the amount that has been called up for its development. And would there be any objection to changing the name if it were proved to be desirable?

The CHAIRMAN: There was at one time some idea entertained of changing the name of the company, but seeing that the grant is made to the trustees in the name of the Great Wheal Vor, the question has not been considered.

Mr. R. W. CHILDS (the company's solicitor): The question has not been considered, and it is not competent for the present special meeting to deliberate upon that question.

The CHAIRMAN: All we want to do is to bring Wheal Metal into a permanently successful position, really and truly, under whatever denomination it may be known. Shakspeare says, "Roses by any other name would smell as sweet," and I think it is but of consequence, if we can make permanent divisible profits, whether we are known as Wheal Metal or Wheal Vor.

Mr. CHILDS: At present there are several setts united, for the question of Carleen has not been considered.

A SHAREHOLDER: Is the company conducting any operations at the Old Wheal Vor?

The CHAIRMAN: All the company now holds is part of the halvans, which is held on tribute. The stamps belong to Wheal Metal sett, which is a very material point. By the terms of the Wheal Metal lease, we have also a right to a supply of water from any convenient shaft. We are now drawing water from the east shaft.

Mr. GOODRIDGE: Then there are the slimes.

The CHAIRMAN: The slimes are part of the Flow, and the stamps and Wheal Metal are under the same lease.

Mr. GOODRIDGE: I mean the slimes alluded to some few months since.

The CHAIRMAN: We let them on tribute, and I regret to say that the person who took them found it a losing bargain; for few persons have been so obstructed in their operations by the late severe weather as tin dressers.

Mr. DOCKER: I have much pleasure in proposing the resolution just submitted.

Mr. HARVEY: I have much pleasure in seconding it.

Mr. GOODRIDGE: Before that resolution is put, I wish to enquire if the number of 23,632 shares is the number left after sinking or disposing of those shares which had not been taken up?

The CHAIRMAN: The 23,632 shares, Sir, are the only shares now on the registered list, and, therefore, those are the only shares which have any claim upon the mine.

After some remarks from Mr. GOODRIDGE, quite irrelevant to the business before the meeting, he proposed an amendment, to the effect that the shares be not reduced, but that they stand as they are at present.—The amendment, finding no seconder, fell to the ground, when the resolution was put and carried, with but one dissentient.

The CHAIRMAN: The next question is with regard to the Carleen sett. It is but right to say that the committee have considered this question in all its points. When the old mines were stopped we reserved Carleen, thinking it probable we might eventually be able to work it; but, after having considered the matter in every way, we think it would hardly be prudent to incur the outlay that would be required to bring it into an efficient state of working. Seeing the exceedingly encouraging prospects of Wheal Metal, and the almost certainty of it becoming a permanently successful property, the committee are unanimously of opinion that it will be much more prudent to confine our operations exclusively to that promising sett. The committee do not feel inclined to spend the gradually improving profits accruing from Wheal Metal upon anything that may be considered of a more speculative character. It is, perhaps, proper to state, as mentioned in the report, that we have received a letter from the solicitors of Mr. Treleawny. (He then read the letter referred to, which was to the effect that unless the present company worked the sett in accordance with the terms of the lease, Mr. Treleawny would, under the powers reserved to him, grant Carleen to certain parties who were anxious to work it.)

A letter was also read from Mr. T Pryor, recommending the abandonment of Carleen.

A resolution was then proposed by the CHAIRMAN, to the effect "That it is not expedient, or to the interest of shareholders, to incur the outlay required for working the Carleen sett, and that the committee be, and are hereby, authorised and empowered to make such arrangements with the lord, or any other persons, with reference to the sett and the sale of the engine and the materials thereof, as they may deem most advantageous to the interests of the company."

Mr. HARVEY: I have much pleasure in seconding that resolution.

Mr. GOODRIDGE: I suppose the terms of that resolution will include the disposal of the machinery on the mine?—The CHAIRMAN: The resolution plainly says so.

The resolution was then put, and carried unanimously.

Mr. DOCKER: I saw an advertisement in the *Mining Journal*, that a 100-in. cylinder engine was required by some parties.

The CHAIRMAN: We are in communication with those parties upon the subject.

A vote of thanks to the Chairman was then passed, when the proceedings terminated.

IMPORTANT DECISION IN THE STANNARIES COURT.

GREAT WHEAL VOR UNITED MINES.

GOODRIDGE *v.* NOAKES.—The plaintiff, a shareholder in these mines, having been refused access to the various books at the head office in London, applied to His Honour at the late sitting that he might be able to inspect them. Defendant replied that the plaintiff had been allowed unrestricted permission to examine the various books for a long period; that he availed himself of this privilege weekly, sometimes twice a week; that he remained sometimes over four hours, making extracts; and that afterwards incorrect statements appeared in the public journals, and that anonymous letters had been received by various shareholders, with extracts from the books, at dates when the plaintiff only had seen them. That, in consequence of this state of things, and the injury thereby done to the property, the committee, for the protection of the property, refused the plaintiff further access to the books, under the conviction that he was the author of these anonymous writings, and did not use his privilege for legitimate purposes. The plaintiff, when asked by His Honour if he had written these letters, declined to submit to examination in the witness-box. His Honour took time to consider his judgment, and has since delivered a written judgment, of which the following is a copy:—

IN RE GREAT WHEAL VOR UNITED MINES.—EX PARTE GOODRIDGE.

This is an application made to me under Sec. 22 of the Statute 18 and 19 Vict., c. 32, to make an order for producing for the applicant's inspection certain books and accounts of the mine, in which he holds some shares. No doubt the general rule is that every shareholder in such a company as this (being an incorporated cost-book company) is entitled to such inspection. He is a co-partner, personally interested and liable in and for the management and obligations of the mine company; and where he has not assented to a special arrangement, delegating to others the management of the concern, his personal interference in each and every transaction of the company is a matter of right. This right, however, is subject to some limitation. It must not, for example, be exercised or claimed in such a manner as to be inconsistent with the proper conduct of the affairs of the partnership, or for unfair or illegitimate purposes, or for sinister objects unconnected with the duty of each partner or shareholder towards his fellow-partners. In such cases, whatever right may exist, a court, when called upon to enforce it, may exercise its discretion in applying an extraordinary remedy, and leave the applicant to proceed by regular suit. It appears to me that the present is not such a case as demands my interference. In the first place, the applicant has voluntarily resigned his right of immediate interference in the conduct of business by the appointment of a committee of management, re-eligible from time to time at short intervals, and subject to certain periodical as well as special opportunities of enquiry and discussion at meetings of the general body of shareholders. This is an arrangement not unusual in mine companies, whether incorporated or not, and the effect of it is to abridge to some extent the larger rights of co-adventurers to interfere in the management, and to claim for that purpose unrestrained access to the documents entrusted to their possession, except at the times and under the circumstances prescribed by the rules and regulations of the mine. The ninth rule appears to me to afford abundant facilities for inspection and explanation of the proceedings of the company; and it is stated before me that none have more industriously availed themselves of the opportunities so afforded than the applicant. If, as stated by him, the books, &c., have in some recent meetings been withheld from him and other shareholders present, I strongly advise the managers of the mine to comply strictly with that rule hereafter. There are other reasons which induce me to make no order in favour of the applicant. If the statement, oral or by affidavit, before me showed anything like a determination on the part of the managers to exclude the investigations, however inconvenient or distasteful, of a gentleman who was *bona fide* desirous of advancing the interests of the mine, and anxious to co-operate with his co-adventurers in informing the management, I should be disposed to assist him, notwithstanding any of the rules and regulations brought under my notice. But I am unable to discern any such friendly indications in the conduct of the applicant. Letters and communications, extending over a year and a half past, have been put into my hands, and stated, on strong grounds of suspicion, to have emanated from the applicant; they are chiefly anonymous. Mr. Noakes has assigned reasons which lead to the conclusion that the materials for them were supplied by inspection of the books, although, as he states, the representations contained in them are not correct. The applicant, who was present at the hearing, was invited to deny or explain them, but he declined to be sworn. The contents of those letters were in some instances inserted in a public newspaper, also without the avowal of authorship, and they occasioned some communications between the editor and the company. These communications, whether in letters to shareholders, to officers of the mine, or to public journals, were first of personal reflections, threats of exposure, and vague imputations of dishonesty. I cannot perceive in their general tone any *bona fide* or earnest wish to call the attention of the shareholders to specific acts of mismanagement. The main object must have been to insult them. Nor do they seem to have attracted the co-operation of any of his fellow-adventurers; for though the company consists of from 250 to 300 shareholders (many of them, like the applicant, holding small numbers of shares), it is stated that in no one instance had his motions at general meetings found any seconder for some time past. I shall not analyse the letters and papers to which I refer; in substance they are such as I describe them. Nor have I referred to any legal authorities bearing on the point; they are collected in the late "Treatise on the Law of Partnership," by Mr. Lindley, where it will be seen that the right of inspection, however liberally sanctioned, either by Act of Parliament or by the practice of a Court of Equity, will not necessarily be enforced by mandamus or order, unless the purpose be reasonable, and it be conducted in a "peaceable, decorous, and gentlemanly manner," and not for the mere purpose of making public or communicating "to strangers the contents of the documents produced." See Lindley, vol. i. p. 66.

E. SHIRE, V.W.

Mr. Chilcott, of Truro, appeared for the plaintiff; and Mr. Roberts, of Truro, instructed by Mr. R. W. Childs, of London, appeared for the defendant (the purser).

TRIBUTE MINING, AND A PENNY CONTRACT STAMP.

[FROM A CORRESPONDENT.]

TRELOAR AND ANOTHER *v.* TAYLOR.—On Tuesday and Wednesday, Feb. 26 and 27, there was tried at Haverfordwest, before Mr. Justice Byles, an important mining case, the object of which was to establish a tribute contract. The plaintiffs, Thomas Treloar and Griffith Morgans, who brought the action against the Messrs. Taylor, of the Lisburne mines, in Cardiganshire, failed to establish their contract. They swore that they had taken a certain piece of ground or pitch, to work for ore, at 6*l.* per ton; first by a private agreement, in the middle of Sept., 1859, for a fortnight, and afterwards by two public auctions, for two months each, the first on the first Saturday in October, 1859; the second on the first Saturday in December, 1859. The limits to which they swore were from a certain winze called Tynyfordd winze, eastward to Frank Prout's winze, and from the deep adit, as high as the 36. It appears that towards the end of the last contract a certain piece of ground had fallen down, containing, according to some witnesses 10 tons, others 17 tons, and others as much as 37 tons of ore, upon which the men were stopped, and notified that they were working out of their boundaries, but they, the plaintiffs, claimed this as their own, as much as the other ore they had broken.

Captain Tyrrel, on the part of the defendants, swore that the bargain in September was never let. He swore that it was not customary to let such private bargains. He afterwards admitted that such bargains were occasionally made. He swore that the bargains the plaintiffs had taken in October and December were to the west of Tynyfordd winze, and not to the east. He swore that he did not know that the men were working out of their limits until January 26, 1860. He swore he had not seen the pitch for four months and a half together, and the book was produced and received as evidence into which the settings were entered, upon which the jury found a verdict for the defendants, or, in other words, that the plaintiffs had sought to obtain the ore they claimed from out of their limits.

It seems necessary to make a few remarks upon this extraordinary trial, in order to secure a more trustworthy method of setting mining bargains. We know it is the custom to call out the bargain, and write the taker's name in the book on the setting-day, if the bargain be taken; but what if the bargain be not taken? there is the rub. In that case any fraudulent purposer may enter a name as the taker, and the poor taker is bound by the action of another to a bargain he never took, and also to abide by the consequences, which might be of the most serious character. Now, we suggest as a remedy for this that a 1d. contract stamp should be affixed to each bargain, and signed by the contractor, which would be evidence, at any rate, that the taker had a hand, and some knowledge, in the signing of the contract. And if such a penny contract stamp were applied to the usual business of life, it would probably form a good revenue for the Chancellor of the Exchequer, and confirm many a promise that is broken or neglected for want of it. How many of us have wished we had either taken or given such a formal instrument on many occasions? Such a trifle would not be felt, and the 2s. 6d. stamp now in use might be made binding on agreements of greater magnitude than those to which the 1d. stamp might be applied; but certainly for mining takings it would afford a guarantee that is evidently much required. In the case to which we are alluding, Treloar swears that he did not take the bargain to the west of the winze. If his evidence be true, then the form of the bargain would have on the setting-day remained without the taker's name. It is the agent's duty of every mine to see that each party of men are working in their limits. To work out of their limits, or within the boundaries of others, is not a venal offence in Cornwall; it is technically called kitting, and many a tributer has suffered imprisonment for the same. Is it likely that any agent would permit a man to work out of his own and into the boundaries of another for 4½ months without discovering it; and is it likely a man perpetrating such an offence would not be brought to justice in the regular way? We have nothing to do with the present decision, but leave the question to the common sense of the mining community, and in the mean time offer a preventative to any attempt at a frustration of the ends of justice, in the form of a penny contract stamp, to be affixed to every bargain, and signed by the taker, as evidence of the validity of the agreement. Both the labouring man and the mining company would be protected by such a system, and the setting-book would become what it ought to be—documentary evidence, that could be relied upon with strict confidence by judge and jury.

TRUTH'S ECHOES; OR SAYINGS AND DOINGS IN MINING.

The Mining Share Market has not shown much activity during the week, the chief transactions having been in some of the favourite mines, in which, probably, a large number of shares have been negociated; but there has been a very good enquiry for many of the leading mines, and although not resulted in actual business, may, in all probability, come off. During the month of February 18 British mines paid dividends to the amount of 31,539*l.*, and the English and Australian Company, 17,500*l.* The fall in the price of tin which has taken place this week will have some influence on the profits of tin mines during the next quarter, but it is hoped that the decline is only of a temporary character.——SOUTH CARADON and WEST CARADON shares have been in request, and some transactions taken place.——EAST CARADON shares have been in good demand, and a large number dealt in; the prices fluctuated but very little, and buyers more numerous than sellers. Shares for cash obtain a much better price than for time, or the account.——MARKE VALLEY shares continue in request, but the transactions have not been numerous, owing to the scarcity of them.——LUDCOTT shares have changed hands, and more being offered show less firmness in price.——MARY ANN and TRELAWNY shares have been dealt in, and the latter appear to have an upward tendency.——HERODSFOOT shares are being enquired for at former quotations.——COPPER HILL shares have been done at lower rates.——SOUTH FRANCES, NORTH FRANCES, and NEW WHEAL FRANCES shares have been dealt in, and buyers still to be found at present quotations.——EAST CARN BREA shares have been freely enquired after, and transactions followed at higher rates.——NORTH BASSET shares have advanced, and continued in good request, but a slight reaction has taken place.——WHEAL BASSET and EAST BASSET shares have been in demand, without any improvement in price.——WHEAL SETON and WEST SETON shares continue in favour, and buyers at market rates.——TRELOWETH and TINCROFT shares have changed hands; for the former there has been an active enquiry, at improved rates.——NORTH TRESKERBY shares have sustained a considerable fall, but there are appearances of an improved market.——STRAY PARK shares have, as usual, fluctuated with the daily business in which they are engaged.——ROSEWARNE CONSOLS and NEW TRELEIGH shares have been in request at better prices, arising from reported improvements at the respective mines.——NORTH DOWNS shares have receded, and but little business done.——MARGARET shares are in fair request, and maintain present quotations.

EAST RUSSELL shares have experienced the usual fluctuations, and are almost daily dealt in.——SORTRIDGE CONSOLS continue heavy, and but few transactions taken place.——LADY BERTHA shares are more freely enquired for, and a slight advance has followed.——CREBOR shares have sustained a decline, arising probably from a falling off in the 48 east.——WHEAL EDWARD shares, which were in good request last week, have been more freely offered, and, consequently, receded, owing to a change in the 60.——WHEAL DAMSEL shares have been in request, and several shares have changed hands at advanced rates.——DALE shares have been in good demand, and a great many transactions have followed.——WENDRON CONSOLS, SOUTH CONDURROW, WHEAL GRENVILLE, BOTTLE HILL, GREAT RETALLACK, and UNITY CONSOLS have also been dealt in.——At CORNUBIA the engine is expected to go to work next month, the surface operations and the underground, as far as possible, are going on very satisfactorily indeed, and from the opinion of those connected with the old workings the prospects are considered highly encouraging.

At EAST CARADON the ground is improved in driving the 60 cross-cut; they are within 7 fms. of the lode. The 50 west continues a good course of ore, worth at present full 40*l.* per fathom, and east it is worth 15*l.* Fawcett's lode continues to produce a little ore. The new north lode is worth 5*l.* per fathom. The usual general meeting was held to-day (Friday), at Liskeard, but the particulars have not yet been received.——MARKE VALLEY continues progressing as last reported. The general meeting will be held on Thursday next, at Salisbury.

At WHEAL EDWARD the lode in the 60 has fallen off very considerably, but it is hoped that an improvement will shortly follow. The other parts of the mine are represented as without any particular change.

At MOLLAND MINE a fatal and distressing accident recently occurred, by the bursting of the boiler attached to the small steam-engine, resulting in death to a youth aged 14, and severely injuring a girl of the same age. The boiler is under a course of repair, which is officially noticed in the weekly report, although no mention is made of the accident. The water is consequently in the mine, and the underground operations suspended, which are likely to continue so for some time.

PENHALE MOOR is showing strong evidence of improvement, and bids fair to become a permanently productive mine. They have a fine course of tin in the caunter, in the 20, recently intersected. The new lode, which proved so productive for several fathoms, has been temporarily influenced and disordered, but is resuming its former appearance in going north. The shaft is down to the 30, and the old lode will be seen in that level in about a fortnight. The north cross-cut is approaching the copper lode, and the ground favourable and mineralised, consequently much interest is felt for the result, where so much is anticipated.

At WHEAL MOYLE general meeting the financial statement showed a cash balance of 270*l.*, with nearly 450*l.* worth of ores ready for sale, on which all the cost for raising has been charged in the accounts. Particulars, with reports of progress and prospects, are not yet received.——At NORTH HALLENBEAGLE the surface operations are going on as rapidly as the weather will admit. The engine-shaft is cut down to the deep adit, and all that can be done before the erection of the engine is in course of doing. The lode at the north shaft, sunk by the Tregullow Company in error, is improved, and producing some excellent work for tin.

At SOUTH WHEAL FRANCES the lode recently intersected by a cross-cut in the 44 continues a good course of ore, worth at least 40*l.* per fm. Other productive places are without change, and further improvements are expected before the next account, by which time they expect to cut the new north lode in the 154.——TRELOWETH is reported as looking better in several important points, and the ground going east is becoming easier. The greatest impediment to the welfare and permanently profitable working of this mine has been the hardness of the ground, consequently the change has been long and ardently looked for.——At WHEAL HARRIETT, the 100 east, though fallen off, is still in a good course of ore, worth 50*l.* per fm., and the stope in the back is of equal value, and a second stope is worth 30*l.* per fm., whilst other productive places continue much the same.——TREVOOLE continues to improve, and looks well for a good mine in the western ground. The lode in the 80 end west continues to open out well; it is 3 ft. wide, and worth 60*l.* per fm.; the leading part is 1 foot wide, and the ore of rich quality, worth fully 30 per cent. for copper. The 90 end is now approaching the ore ground gone down from the level above, and is daily improving. A cross-cut is being driven to intersect the lode in the 80, which will take it 70 fathoms in advance of the present end, and to all appearance near that point, as the end is very wet from the rush of water. This discovery is one of great importance, as the lode is whole to the surface.——ROSEWARNE CONSOLS have very considerably improved; in the 30 east they have a very good course of ore, which has been proved for nearly 5 fathoms, worth full 30*l.* per fm.——At NEW TRELEIGH they have intersected the lode in the 70 cross-cut, and, from what has been seen of its character, there is every reason to expect a good productive lode; and what renders it more important is that the lode is whole to the surface. The other productive places continue without any change.——EAST ROSEWARNE progresses without any apparent change in the 43 east and west, which are the most productive places of operation. There is a very good lode in the stope above the 43 west, which is the best in the mine.——At DALE MINE the Pipe of lead continues of of the same value as reported before, worth full 120*l.* per fm. The removal of the business of the company to the offices of Mr. Dunsford has given general satisfation to those interested. JAMES LANE.

From Mr. LELEAN:—Continuing my remarks from last week, SPEARNE MOOR has declared a dividend of 30*s.* At ROSEWARNE CONSOLS the lode continues rich; they have already opened 5 fms., and taken down the lode, the produce of which is 8 tons of rich copper ore, computed to be worta 30*l.* per ton, and should it continue this mine will soon become a very valuable property. EAST TRESKERBY is looking well. WEST CONDURROW has materially improved, and shares are in demand at 2 to 2½. NORTH BASSET and EAST CARADON are both selling high enough, in my opinion, the advance being fully as much as I expected. NANTEOS AND PENRHIW continue to improve, and shares are likely to go higher; so also is SOUTH DARREN, they are selling large quantities of ore from both these mines. ALFRED CONSOLS will do to buy at the present low figure for a speculation, as the least improvement in any of the important points that are now being pushed forward will put these shares to 10*l.* in a few days. The field of machinery is amply worth all the money the shares are selling at, and the chances of success very great. STRAY PARK is working at a loss, and, without discoveries, shares will recede rapidly. CALVADNACK made a call of 25*s.*; this mine is another failure, like Lewis. PROVIDENCE and ST. IVES are flat, at 38 to 40. It is reported that EAST RUSSELL shares ought to be sold. The metal market is unchanged, and it is to be hoped the next step will be upwards. More confidence pervades the market, and good and cheap stock is enquired for.

SUBSTITUTE FOR GUNPOWDER.—Messrs. Harrison, Bradbury, and Buckley, of Oldham, propose saccharine matter, 50 parts; nitrate of potash, 48 parts; and club moss, 2 parts, as a substitute for gunpowder.

SUBSTITUTE FOR NITRATE OF SILVER.—Mr. L. C. Macaire, as a substitute for nitrate of silver, proposes a combination of pure silver, 1 part; nitric acid, 1·50 part; azotate of potash, 1·50 part; zinc, 0·1 part = 3·1. This compound is cheaper and more efficient for photographic purposes than the ordinary nitrate of silver in use.

Mining Correspondence.

BRITISH MINES.

ABERDOVEY.—A. Ede: The engine-shaft is sunk 7 fms. 2 ft. 4 in. under the 32; the ground is still hard, with a great quantity of spar mixed with it, but we have this week cut a branch of lead of about 1 in. in width, letting out a great quantity of water, and no doubt forming a leader to the south lode, which we are daily expecting to meet with. The stopes throughout the mine are without alteration since last report, and all operations are in favourable progress.

ALFRED CONSOLS.—S. Uren, T. Hosking, March 6: Davey's engine-shaft, sinking below the 150, and the 150, driving east of the said shaft, on the main lode, are without change for the past week. The lode in the 140, driving east of the said shaft, is 3½ feet wide, producing good stones of ore. The lode in the 130, driving east of the said shaft, is 3 feet wide, worth 25*l.* per fathom. The lode in the 120, driving east of the above shaft, is at present disordered by a slide from the south, and now worth 12*l.* per fathom. We calculate on an important improvement here when freed from its influence, as we have a lode just before us, in Floyd's stope, worth fully 30*l.* per fathom. Roberts's stope, in the back of the 140, east of said shaft, is worth 12*l.* per fathom. Floyd's stope is worth 30*l.* per fathom. Rodda's stope is worth 25*l.* per fathom. Richards's stope, on the north branch, is worth 15*l.* per fathom. The rise in the back of the 120, on the north part of the main lode, is worth 10*l.* per fathom.

ASHBURTON UNITED.—W. Edwards, March 6: Hobson's engine-shaft is now down 6 fms. 4 ft. below the 67. During the last 3 feet the ground has improved for sinking. There is no change of importance to notice in any other part of the mine since my last.

BALLYVIRGIN.—D. T. Macdonald, Feb. 28: North End: With respect to this end, I have to state that before commencing to drive west from Rathclooney shaft, I judge it prudent first to ascertain whether the rock in the bottom of the shaft was a boulder, or the rock of Rathclooney hill: having put a few holes in, we found it was a boulder. We have since sunk the shaft about 3 ft. through clay and gravel, without meeting with the rock. The south stope will yield about 10 ewts. of lead, 1 ton of coppery and 3 tons of plain mundic per fathom. The arch of ground near air shaft will yield about 12 cwts. of lead and 7 tons of mundic per fathom. We have dressed and put to pile ¼ ton of first crop lead, ⅛ ton of second crop lead, 7 tons of coppery mundic, 12 tons of plain mundic, and prepared for the crusher 3 tons of lead ore.

BEDFORD CONSOLS.—Capt. Mitchell, March 7: No change has taken place in the mine worthy of notice since last report.

BEDFORD UNITED.—J. Phillips, March 5: The lode in the 115 west is 2 ft. wide, and worth 2 tons of copper ore per fathom. We have not taken down the lode in the 103 west. The same remark will apply to the lode in the winze sinking in this level. Yandell's stopes, in back of the same, are worth 4½ tons, and Manuel's 3 tons per fm. Woolcock's stopes, in back of the 90 west, are worth 4 tons per fathom. The lode in the 58 east is 2 ft. wide, saving work. The stopes in back of this level are worth 2 tons of ore per fathom. We sampled off at Morweltham, on March 1, 206 tons 1 cwt. 2 qrs. of copper ore, and sampled computed 200 tons.

BENEATHWOOD.—J. Loan, March 7: The engine-shaft is down nearly 9 fathoms below the 30; the ground much the same as reported last week; congenial for lead and good for progress. The 20 north is cleared and secured; the lode in the end is 2 ft. wide, about 12 inches of which, on the eastern side, is composed of prian, mundic, and lead; the other part is of a flookany nature, and it carries two firm walls, especially the western or footwall, and underlies about 2 feet per fathom.

BICKLEIGH VALE PHŒNIX.—J. Hambly, March 6: Since I wrote you last we have cut through a small lode in the adit end about from 12 to 15 in. wide, but larger in the bottom of the end than in the back; the lode is composed of spar and capel, containing but little, if any, mineral, but letting out a great deal of water for such a small lode. The ground is rather harder than otherwise about the lode, but I hope it may improve as we get clear from it. The men are working well. Mr. Bennett, our managing director, was down on Saturday last, and paid the men, and all passed off with the usual satisfaction and good feeling.

BREA CONSOLS.—C. T. Craise, March 4: On Feb. 23 the following bargains were set:—Trevesa engine-shaft to sink below the 30, by six men, at 19*l.* per fm., and will be completed to the 40 in about seven weeks, when we shall commence the cross-cut north to intersect the Redwork lode. The 20, to drive east on the Redwork lode, by six men, at 13*l.* per fm.; the lode in this level has considerably improved in size and quality; judging from appearances, I think it is from 8 to 10 ft. wide; it is of a beautiful composition of spar and cockle, producing some good tinstuff, which makes in small pipes, running in different directions through the lode; I am of opinion that in depth this will lead to an extraordinary course of tin ore. The winze below the 20, on the same lode, is sunk 5 fms. 1 ft., and set to six men, at 15*l.* per fm.; the lode is large, but at present poor; the tin ground having gone east of the winze. The 30 fm. level, east of cross-course, on the same lode, was driven 1 fm. 4 ft. last month, by four men. I have this month increased the number to six men, for the purpose of intersecting the tin ground as soon as possible. I have set the 20, east of cross-course, on Thomas's lode, to drive by two men, at 7*l.* per fathom, and 10*s.* tribute, in order to prove the lode. The 30, east on the same lode, was set to drive by two men, at 10*l.* per fm.; the lode is small, but produces good stones of tin. The rise in back of the 20, on the same lode, is suspended for want of air, and the men are put to drive the 10, to intersect the tin ground, which will both ventilate this part, and open up tribute ground. The winze east of the cross-course, on Wheal Mathew's lode, in bottom of the 20, was set to four men, at 11*s.* 6*d.* in 1*l.* tribute. The rise in back of the 20, on the same lode, was set to four men; it continues much the same as last month. We have commenced securing Wheal Mathew's shaft below the 20, by six men, and preparing to clear it to the bottom in search of the course of tin supposed to be lost by the former workers. There is no particular alteration in our tribute ground. We have employed ten men more on tutwork since our last report, in order to develope the lodes. The month's sale of tin will be about 3 tons, in addition to which there is the tin got in the Bougey, by four men (about 30*l.* worth), but not brought to surface, in consequence of the lower part of the shaft having given way. This, however, will be rectified in a few days. The gradual increase of our returns shows our position and prospects to be highly satisfactory.

BRONFLOYD.—M. Barbery, March 6: Settings for March: The 17 to drive west of cross-cut, on No. 1 lode, by six men, 3 fms., or the month, at 7*l.* per fm.; the lode is looking most promising, yielding saving work for the width of the level. The stopes on No. 4 lode, in back of the 13, below the deep adit, east and west of James's winze, by 12 men, 15 fms., or the month, at 60*s.* per fm. The back of the deep adit, about 8 fms. east of the main shaft, by eight men, 8 fms., or the month, at 70*s.* per fm.; the lode in each place is yielding about ⅛ ton of ore per fm. The shaftmen are at present engaged in putting in penthouse, and will in a day or two commence to sink for cistern plat. Dressing, &c., as usual. We shall sample 20 tons of ore to-morrow.

BRYNTAIL.—James Roach, March 7: The lode in the 10 fm. level east is 2½ ft. wide, consisting of quartz, clay-slate, and a little sulphur and cubes of lead ore, but not sufficient of the latter to value. The highly promising character of the lode, and the water issuing therefrom, leads us to expect an early improvement for lead. The stopes in back of this level are quite as well as when last reported. The winze under the 10 has drained the water from the 10, consequently sinking is prevented. We are now stoping the ends of ground to test the quality of the lode. The 25 cross-cut is in compact grit-stone, therefore our former progress in driving is at present retarded, but I hope soon to get out of this stone. Had we the ground we expected to drive in, the lode would have been intersected ere this.

BULLER AND BASSET UNITED.—G. Reynolds: Since we have put the steam-whim to work our speed in sinking, and also in laying open the lode in the 80, both east and west, has been greater. In the shaft the lode is still large and masterly, with mundic, and spotted throughout with rich copper ore. I look forward daily to a great improvement as we sink in depth. By perseverance I think we shall lay open a good and lasting mine. The lode in the 80 fathom level, both east and west, presents the same appearance as in the shaft.

CALSTOCK CONSOLS.—W. B. Collom, March 7: In the 48 east the lode contains stones of ore. The caunter and east and west lodes are together here In the 48 west, at the last taking down of the lode it was found to contain rich stones of ore, the lode presenting a very kindly appearance. The water from the end has much increased. In the back of the 48 east, between the cross-course and the shaft, we have let a pitch at 6*s.* 8*d.* in 1*l.* The lode in the bottom of the engine-shaft continues divided, the caunter part being to the south, and the east and west lode north, a horse of killas dividing the two lodes. The lode contains copper ore, peach, flookan, and white iron. In the 36 west the lode is large, and of a kindly appearance. The winze in bottom of the 36 east is suspended for the present, in consequence of there being so much water in it. No lode has been taken down in the sinking. We expect the driving of the 48 east will soon drain away the water from this winze. The stopes in back of this level will yield from 2 to 3 tons of ore per fm. In the 12 east the No. 2 caunter lode has been cut through to the west of its junction with the east and west lode; it is 3 feet wide, composed of ore, mundic, and quartz, and of a very kindly character. We have commenced driving west on it, and expect to find it improve.

CAMBORNE CONSOLS.—W. Roberts, March 5: The following bargains were set on Friday last:—A rise in back of the 50, on the caunter lode, by four men, at 6*l.* per fm., and 6*s.* 8*d.* in 1*l.* for the ore. The 50 cross-cut north, by two men, at 6*l.* per fm.; and the same level to drive south, by two men, at 4*l.* per fm. The adit to drive west on the silver lode, by two men, at 5*l.* per fathom.

CARADON CONSOLS.—W. Rich, March 5: There is no material alteration in the 54 cross-cut north since last report, except a little water oozing from the end. If we take the average bearing of the Menadue lode at the adjoining mine as a guide, then the cross-cut is driven up to the point where we ought to intersect it in this mine; but should the lode have taken a more north-westerly direction between the ends at West Caradon and our boundary we might expect to drive several fathoms further to meet with it. The cross-cut south is being forced on as fast as possible; the ground is still easy for driving, but there is no change to notice. In the 54 north we have opened a few feet east of the cross-course, on the south part of the gossan lode, to prove it; this part is 3 ft. wide, nearly perpendicular, and has a bearing of 15° south of east; it carries a little tin, but poor for copper; this lode is large, and we are not deep enough to give it a fair trial.

CATHERINE AND JANE.—F. Evans, March 6: The 10 west is driving by six men, at 6*l.* 10*s.* per fm.; the lode is all the width of the level, composed of sulphur and blende. The stope behind this level looks better than last reported; as this is a trial for the large piece of ground driven through in this level, in will be continued, though as yet it will not pay for working. The men usually employed in driving the 10 east are now engaged holing a piece of ground in back of this level with the eastern winze; after this is done we shall stope some lead ground from the winze. The 10 east has generally a small branch of lead, but nothing of importance. The lode in the shaft is wider than can be carried; rather a promising looking lode, with good stones of lead, but not to value.

CORNUBIA.—W. H. Gray, March 6: We have beautiful ground in the engine-shaft, and the masons are getting on fast with the house.

CUDDRA.—J. Webb, March 7: After the clearing the rubbish in the engine-shaft 6¼ fms. below the 66, we found a solier, and the shaft clear 10 fms. below, which has been now drained; finding the shaft clear will save us three months in time, besides the expense. We must fix a set of bearers to take up some weight of the sinking lift; we hope now to make good dispatch in reaching the bottom of the shaft, when returns of copper ore will be made. The 66 is progressing well in being put back westward. We are breaking some good tinstuff in the 56, and laying open the lode for bringing it to surface with good dispatch. In the 30, 28, and 10 fm. levels we are progressing well in cutting out the killas under the lode, where we find some branches containing tin; this is favourable for the lode being productive. The 30 fm. level rise men have good ground on the north lode; this lode is not very wide, but carrying a little tin; and, from appearances, we shall get much tin here when holed to the adit. The new shaft will be soon communicated to the 10; the roof is put on the stamping engine-house, and the engineers are busy about the engine.

DEVON AND CORNWALL UNITED.—T. Neill, March 5: William and Mary: The 10, driving east of engine-shaft, is looking very promising for improvement, worth at present 2 tons of ore per fm. We have no change to notice in any other part of the mine.

DEVON GREAT WHEAL ELLEN.—W. Taylor, Feb. 28: Since my report of Feb. 13 the lode has been cut through; its width is 20 inches, and comprises spar, quartz, gossan, mundic, and particles of tin, and is a very kindly lode indeed. Another feature presents itself on opening on the lode,—a cross-course has been met with which runs counter to the direction of the other lodes, and by the intersection appears as hove, and the miners are now engaged in extending the cross-cut or adit with the view of reaching the shifted portion of the lode.

DEVON NEW COPPER.—P. Hawke, March 6: The engine-shaft in the course of sinking below the 68 fm. level is progressing satisfactorily, and the killas is of an approved character; every effort is being made to reach the 78, if possible, by the end of May or early in June next. The end east in the 68, on the great north lode, comprises a very compact killas; the dispatch in proceeding with the driving is quite satisfactory. I am not in a position to report on the character of the lode here, as no cross-cut into the lode will be made until 20 fms. from the engine-shaft is reached. The porous and mineralised character of the great north lode in the cross-cut in the 68, presents every feature and indication imaginable for a rich and valuable discovery of copper ore. I can only disclose the real sentiments of my mind in relation to the present prospects of the mine at the bottom level, by again repeating that I have no more doubt as to the future remunerative results than to doubt the mine now exists. The cross-cut in the 58, 20 fathoms to the west of the engine-shaft, is improving; the lode presents a very pleasing appearance, and I have no doubt that as we progress in penetrating the more northern portion of the lode, it will exceed in value the cross-cut made at the engine-shaft in this level.

DEVON UNION.—J. Donnal, March 6: We have cut a lode in the cross-cut in the 15 east side of cross-course, but cannot see enough of it as yet to give you the particulars as to the size or character, but will do so in a day or two. We are in fork to the bottom of the shaft. Capt. Williams was here underground yesterday; we will give you a joint report of particulars in a few days.

DULTA.—J. Martyn, March 6: Since my last, in cross-cutting south we have cut a very promising lode, about 20 in. wide, worth for tin about 2 cwts. per 100 sacks. We have six men driving the south cross-cut, and from all appearances are very near Butt's lode. The ground is fair for driving, and the water issuing very strong. We are obliged to close timber the level in the north cross-cut, which we are driving with all speed. There is a large stream of water issuing from this level, indicating a great improvement shortly. The dressing-floors are being got ready as fast as possible, and we hope shortly to be in full work. The engine is working well, and everything looking promising for a good mine.

EAST CARN BREA.—T. Glanville, March 6: In the 26 east the south lode is 4 ft. wide, composed of spar, gossan, and copper ore. In the 26 west the lode is yielding 1 ton of ore per fm. In the 40 west the lode is yielding 2 tons of ore per fm.

EAST DEVON GREAT CONSOLS.—T. Richards, March 4: We have driven west at the 40, 3 fms., and the men are now engaged driving south, for the purpose of cutting through the lode, and preparing at the same time for sinking below.

EAST GRENVILLE.—G. R. Odgers, March 2: The lode in the engine-shaft is 3 ft. wide, of prian, quartz, and gossan, and which is yielding good work for tin. The lode in the 25 east is about 18 in. wide, of quartz, prian, and gossan, from which I have vanned some very good samples of tin; we also find stones of mundic coated with black ore. In the 25 west the lode is 4 ft. wide, of prian, quartz, and gossan; as pretty looking a lode for the depth as any miner would expect to see, and which is likewise yielding good tinstuff. I have been making enquiries about a stamps.

EAST GUNNIS LAKE AND SOUTH BEDFORD.—J. Phillips, March 7: We are still driving by the side of the lode in the 36 east. The winze and stopes in the bottom of the 36 are looking much the same. The lode in the deep adit level east is 6 ft. wide, composed of peach, mundic, and good stones of ore, and is a fine-looking lode.

EAST ROSEWARNE.—J. James, March 2: The ground in the 55 cross-cut is rather hard for driving. The lode in the 43 east is 9 in. wide, worth 8l. per fm.; this is suspended until we hole the rise. In the rise over this level the lode is 9 in. to 1 ft. wide, worth 9l. per fm.; this will open good profitable ground. In the 43 west the lode is 1 ft. wide, worth 7l. per fm.; much better at the back. No. 1 stope is worth 14l. per fathom, and No. 2, 8l. per fm. In the 33 east the lode is disordered by a small cross-course, and is at present unproductive. We have set 16 pitches to 42 men and 3 boys, at tributes varying from 2s. 9d. to 13s. 4d. in 1l.

EAST TREFUSIS.—J. Pope, March 7: The 58 is driven north of Smith's engine-shaft about 19 ft.; no lode or branch intersected as yet. In the 34, east of cross-cut on Trelawny's lode, the lode is 20 in. wide, composed of spar, peach, mundic, and a little copper ore, a promising lode. In Trelawny's flat-rod shaft, sinking below the 30 (from surface), the lode is 3 ft. wide, containing stones of copper ore, mundic, and quartz.

EAST WHEAL FALMOUTH.—W. Hancock, March 5: We are progressing with the sinking of the new engine-shaft below the surface so fast as possible, by nine men, and no time will be lost in getting it down to the adit level; the sawyers are busily engaged cutting timber for the collar of it.

EAST WHEAL RUSSELL.—J. Goldsworthy, March 6: There is no change in the 110 fm. level, east of Homersham's shaft, since lase reported, the lode is producing good stones of ore. There is no change in the 100 east cross-cut north since last reported. In the 100 east, on the south part of the lode, the driving will be resumed to-day; the lode is worth 2 tons of rich ore per fm. The stope in the back of the 88, on the north part of the lode, is worth 25l. per fm. The lode in the 66, east and west of Thomas's cross-cut, is 5 ft. wide, producing good stones of yellow copper ore -a kindly lode. No change in any other part of the mine.

— J. Richards, March 7: Homersham's Shaft: In the 110 east the lode is 2 ft. wide, yielding good stones of ore, and is promising. In the 100 east, which has been resumed on the south part of the lode, the part being carried is 5 ft. wide, worth 2 tons of ore per fm. In the 100 cross-cut north some branches are being intersected; the main part, however, is thought still to be to the north. In a new stope in the bottom of the 88, east and west of Oats's No. 2 winze, the lode in the former direction is worth 30l. per fm., and in the latter 15l. per fm. The lode in the stope in back of the 88 is worth 25l. per fm. In the 60 east 2 fms. have been set to drive west of Penrose's cross-cut; the lode is 5 ft. wide, and yields some saving work: it is intended, as soon as the 2 fms. are driven, to put up a rise in the back thereof, when judging from the favourable character of the lode an improvement will take place.

FOWEY AND PAR UNITED.—J. Tredinnick, March 6: The ground in the cross-cut is just the same—driving by six men, at 5l. per fathom. We shall endeavour to cut Lucas's lode by the time of the meeting. We shall take down the lode in the end to-morrow, and if there is any improvement I will let you know.

FURSDON.—J. Hampton, P. Daw, March 5: In the 21 the cross-cut is still in very promising ground, quite green, and we have lately met with a stream of water. The 11 east is just the same as when we last advised you. The 11 west is worth 1½ ton per fathom, and a most promising end it is. The stopes in the back of this level are worth 1½ ton per fm. The stopes in the back of the 11, on Ellen's lode, are producing about 4 tons per fm. We sampled 60 tons of copper ore on Friday last (computed), and are now dressing again towards the next sampling, two months hence.

GAWTON.—G. Rowe, March 4: We have set the following bargains:—The stope in back of the 50, by six men, at 4l. 15s. per fm.; lode 5 ft. wide, worth 1½ ton of middling quality ore per fathom. No. 2 stope, by four men, at 5l. 10s. per fm.; the orey part of the lode will produce 2 tons of good quality copper ore per fathom. The stope in bottom of the 36, by four men, at 4l. 10s. per fm.; lode from 5 to 6 ft. wide, producing 2 tons per fathom. The 36 end to drive west, by two or more men, at 3l. 10s. per fm., the lode is small, but shows indications of improvement. The stope in back of the 24, by four men, at 3l. per fm.; the lode will produce from 2 to 3 tons per fm. A tribute pitch in back of the 50, by two men, at 13s. 4d. in 1l. A pitch in bottom of the 36, by two men, at 13s. 4d. in 1l. All the filling and landing for two months, at 6l. 15s. per month. We sampled on Friday, computed, 40 tons of ore.

GREAT RETALLACK.—W. H. Reynolds, March 2: In the 35 we have cut into the lode 3 fms., and have no wall yet; we have set to the men to open on it east and west, at 6s. per ton for blende. The pitches at the 30 are re-set at the former tributes, and the shaftmen are completing the shaft on the underlie from the 20 to the 35. We expect to be sinking below the 35 in two or three weeks.

GREAT SOUTH TOLGUS.—John Daw, March 6: We have cut through the lode at the 125; it is 2 ft. wide—a very promising lode. In the 50 fm. level, west of Lyle's shaft, the lode is 1½ ft. wide, producing 1 ton of ore per fathom. In the 40 fm. level west the lode is 2 ft. wide, producing 1 ton of ore per fathom.

GREAT TREGUNE CONSOLS.—J. Spargo, March 7: The lode in the 80 end, west of Hobbler's shaft, is fully 4 ft. wide, composed of fluor-spar, mundic, blue peach, and some good stones of copper ore, similar to the lode in the bottom of the 70, but not as yet producing so much ore, as we are some short distance behind the shoot of ore gone down in the above level. The stopes in bottom of the 70 are producing some good ore, and I have every reason to believe it will improve as we extend these stopes. The men that were driving the 80 end are and will be employed casing and dividing the shaft from the 70 to the 80, so as to bring down the machine kibble; this work will be completed in four days, when we shall resume driving the 80 with all possible speed, so as to get into the orey ground now stoping in the bottom of the 70 fm. level.

GREAT TYWARNHAILE.—J. Hampton, March 4: Herewith I beg to hand you the list of materials, &c., necessary for Tywarnhaile, and also a list of estimated raisings of ore for the present two months, which will not be less than 600 tons, and as there will be in that quantity a larger amount of better ore, I think we may safely reckon on 2400l. worth at least for the two months; the ground we have developed is that of the lowest tribute, and as some of the tutwork places are communicated, we have now good air to enable us to avail ourselves of increased resources, and inasmuch as we go below the 60 (which we shall soon, the plunger-lift being fixed at the 50), the returns will increase monthly, and as the ore is better in quality at the deeper levels, we shall realise more money by the sales of less quantities. The more I consider this matter the more I am convinced of the high intrinsic value of this property.

GREAT WHEAL ALFRED.—W. Bugelhole, J. Delbridge, March 6: Copper House Shaft: The north part of the lode in the 220, west of the above shaft, is improved; this part is 4 feet wide, and is now worth for tin and yellow copper ore 23l. per fm., and from present appearances we do expect a greater improvement in this end shortly; the lode where we are now stripping down, 8 fms. behind the present end, is improved, worth 12l. per fm. We have cut more water in the 210, west of this shaft; this indicates we are nearing the bunch of ore gone down in the bottom of the 200; the south part of the lode is 3 feet wide, worth 12l. per fathom; the principal part of the lode is still standing north, which we shall stope down when we can make it convenient. The lode in No. 1 stope, in back of this level, is worth 50l. per fm.; the lode in No. 2 stope 55l. per fm.; No. 3 stope 19l. per fm.; No. 4 stope 22l. per fm.; No. 5 stope 23l. per fm. We have communicated the rise in back of this level with the winze sunk below the 200, which is of great benefit to the circulation of air. The lode in No. 6 stope is worth 15l. per fm. No. 7 stope, in bottom of this level, west of Kemp's winze, is 8 feet wide, worth 26l. per fm. No. 8 stope is worth 12l. per fm. The lode in the winze sinking below this level is worth 35l. per fm. The lode in No. 9 stope, east of shaft, in this level, is 3 feet wide, worth 20l. per fm. No. 10 stope is worth 12l. per fathom. The lode in the 190, east of Painter's shaft, west of cross-cut, is 5 feet wide, worth 12l. per fm. There is no change in the 160 cross-cut.—The South Lode: The lode in No. 1 stope, in bottom of the 137, west of Copper House shaft, is worth 16l. per fm. No. 2 stope is worth 13l. per fm.

GREAT WHEAL BUSY UNITED.—J. Delbridge, R. Giles, J. Bryant, R. Richards, March 2: At the engine-shaft, sinking below the 120, the lode is 1 ft. wide, a little tin and copper. At Offord's shaft, sinking below the 110, the lode is small. In the 110, east of ditto, the lode is 1 ft. wide, poor. In the stopes in the 100, east of ditto, the lode is yielding 3 tons of ore per fm. The 90 end is yielding from from 14 to 17 tons per fm. The 90 stopes are yielding 14 tons per fm., and Levitt's winze 14 tons per fm., with a large quantity of tinstuff. At Mathews's shaft, sinking below the 80, the lode is 7 ft. wide, worth for tin and copper 20l. per fm. In the 80, east of ditto, the lode is yielding low-priced tinstuff. The 70, east of ditto, is yielding low-priced tinstuff. In the 40 east the lode is yielding good work for tin. In the 120 rise, against Fielding's, the lode is unproductive. In the 100 rise, against old sump-winze, the lode is 20 in. wide—tribute ground for tin. In the 90, west of Rawling's, the lode is large and poor. In the 80 cross-cut, toward's King's, no change. In the 70, north of ditto, no change. In the 50, west of Black Dog rise, the lode is large, spotted with ore. Our machinery is working well, and we are progressing with the surface works as fast as the weather permits.

GREAT WHEAL FORTUNE.—J. Daniel, R. Pryor, J. Hoskin, March 6: In Hoskin's flat-rod shaft, sinking below the 58, the lode is 2½ feet wide, worth 10l. per fm., with indications for improvement. In the stopes in the bottom of the 48, west of shaft, the lode is 5 ft. wide, worth 70l. per fm.

GREAT WHEAL MARTHA.—H. Rickard, March 5: On Saturday last we held our monthly tutwork-setting, which is as follows:—The 40, east from engine-shaft, to drive by six men, at 5l. 5s. per fm., stented 2 fathoms. The 40, west from ditto, by six men, at 5l. per fm., stented 3 fms. The 30, south through the lode, by six men, at 7l. 10s. per fathom, stented 1 fathom, or cut through the lode. The 20, west from Thomas's shaft, at 4l. 5s. per fm., stented 3 fms. A cross-cut, south through the lode, in the 20, by two men, stented 1 fm., at 7l. per fm. In the 40, west from engine-shaft, during the past week, we have intersected a small cross-course, composed of soft spar, mundic, and spots of blende; the lode to the west of the cross-course is yielding stones of copper ore of good quality, with every indication of opening out a valuable one. The 40 east is still looking well, having driven upwards of 9 fms. through a fine course of ore of excellent quality. We have not yet cut through the lode in the 30 south, the lode being very large, and producing some fine work for copper ore. The 20, west from Thomas's shaft, is not producing quite so much ore, but it is of much better quality, and the ground greatly improved for driving; here we are opening out some fine ground that will be taken away at very low tribute, and leave a good profit to the adventurers. The tribute department is yielding its full supplies, having now on the floors about 500 tons—upwards of 400 tons already fit for the crusher. The whole of February's raising is still underground. Not a moment ought to be lost in fixing the necessary pitwork and sinking the engine-shaft as fast as possible.

GREAT WHEAL VOR UNITED.—Thos. Gill, March 5: Metal engine-shaftman are engaged in completing a drop-plat in the bottom of the 142; they will resume sinking below this level in the course of a day or two, and we expect to intersect the lode in about 6 ft. sinking. In the 142, driving east of Metal engine-shaft, the lode is 2 ft. wide, worth about 40l. per fathom. In the 142, driving west on Metal lode, west of Metal engine-shaft, which is 1½ ft. wide, worth about 30l. per fathom. In the 132, driving east of Metal engine-shaft, on the lode, which is 1½ ft. wide, worth about 25l. per fathom. In the 132, driving west of Metal engine-shaft, the lode is 3 ft. wide, worth about 15l. per fathom. In the 122, driving east of Metal engine-shaft, the lode is 2½ ft. wide, yielding a little tin, but poor. In a winze sinking in bottom of the 132, east of Metal engine-shaft, the lode is 2½ ft. wide, worth about 160l. per fathom. In the stopes in back of the 132, both east and west of the engine-shaft, are yielding much the same as they have for some time past. We have communicated the 90 rise with Ivey's, in the 70. We have now a communication at Ivey's shaft from surface to the 100, and hope in the course of a few months to fix our lift in the 100.

— T. Gill, March 6: We have cut a good lode to-day in the 122, east of Metal shaft; it is worth at present from 20l. to 30l. per fathom. If this continues it will be a very important thing. We shall be able to give you the real value in the course of a few days. The 132, east of Metal shaft, is a little improved since yesterday. All the other parts of the mine are looking much the same as when you were here. We shall not take down any lode in the 132 west for a day or two. Our machinery is working very well.

HAWKMOOR.—J. Richards, J. T. Phillips, March 5: The lode in the eastern engine-shaft is full 3 ft. wide, composed of quartz, capel, mundic, and occasionally good stones of ore, a promising lode. In the 50 east the lode is full 3 ft. wide, composed of quartz, mundic, and worth about 2 tons of copper ore per fm. In the 50 west the lode since last week has been smaller, but is opening out again and presenting a very promising appearance, although as yet only producing occasional stones of ore. In the stopes in back of the 50 east the lode is large, being from 2 to 3 feet wide, and worth 1½ ton of copper ore per fathom. In the pitch in back of the 30 east but little has been done since last week; the lode is still worth from 3 to 4 tons of copper ore per fm. In the 20 east the lode is small and poor. In the adit level, driving west at West Hawkmoor, the lode shows no important alteration since last report.

HINGSTON DOWN CONSOLS.—T. Richards, March 6: The ground in the 120, east of Morris's engine-shaft, is easier of progress; the lode continues to produce from 2 to 3 tons of ore per fm., and is exceedingly promising. The 75 east is producing good stones of ore, and promising improvement. There is no change in any other part of the mine. We sampled on Friday last (computed) 301 tons of ore.

HOLMBUSH.—F. Pryor, March 6: The 20 fm. level, on flap-jack lode, is gradually improving, and worth about 10l. per fm. We have set a rise in back of this level; lode large, with a promising appearance. We have suspended the 50 end west for the present, so as to enable us to sink a winze below this level for ventilation; the air would not admit of our driving and sinking at same time. The winze is worth 7 tons per fathom. All other places are much the same as for some time past.

HUCKWORTHY BRIDGE.—J. H. Rodda, March 6: The lode in the 25 end east is 5 feet wide, composed of capel, peach, prian, mundic, and spots of ore; in driving this level east we shall gain more backs, and in more congenial ground for ore. The lode in the 15 end west is at present unproductive. I would recommend sinking the engine-shaft 15 or 20 fms. before we drive any more west.

KELLY BRAY.—S. James, March 2: The lode in the 75 east is 3½ ft. wide, yielding from 2½ to 3 tons of ore fm., worth 4l. per fm. The lode in the 45 east is 4 feet wide, yielding a quantity of mundic, blende, and stones of ore; a strong healthy lode, with a quantity of water issuing from the end, which is a good indication. We have suspended the 25 east for the time, and set the back on tribute, as the air is insufficient for two pares of men. No change in the tribute since last report.—Eastern Mine: The 70 cross-cut has been driven north towards the lode 13 fms., in which the ground is of a favourable character for the production of mineral. I have set the men to cut the lode, at 9l. per fm., which I hope will be done in about six weeks. In the 60 east the lode is about 1½ feet wide, embedded in congenial strata, and my impression is that we are driving on the top of a bunch of ore, as there is a branch in the end underlying north, 7 feet wide, composed of quartz, mundic, and rich copper ore, which drops into the lode in the bottom of the level, and will, I have no doubt, greatly improve it. The stratum is considered by all practical men who have seen it to be highly congenial for mineral.

LADY BERTHA.—Capts. Harpur and Metherell, March 7: In the 53, east of shaft no lode has been taken down lately; when last cut into we found it to be about 4 feet wide, composed of mundic, peach, spar, and spots of ore; in the same level west the ground is very hard for driving through, which renders our progress in this place rather slow for the present. In the 41 west the lode is composed of quartz, mundic, and ore, worth of the latter about 1 ton, or 6l. per fm.; in the cross-cut, south of this level, for the purpose of intersecting any portion of the lode which may be in that direction, the ground is moderately easy for driving, and has a favourable appearance. In the 30 east we commenced cutting into the lode to-day, but cannot give you its correct size; so far as seen it is composed of capel, mundic, spar, and peach, intermixed with a little ore; the lode in the stopes in bottom of this level continues to look well, consisting of ore and mundic, worth of the former 6 tons, or 30l. per fm. In the stopes in bottom of the 20 east the lode is composed of mundic and ore, worth of the latter 3 tons, or 15l. per fm. The tribute department is without alteration. We sampled on Friday last 226 tons, computed, of rather better quality.

MAUDLIN.—John Tregay, March 2: In the 50 west end the lode is poor, but likely from general appearances to change shortly for the better. In the 50 east the lode is about 2 ft. wide, composed principally of peach, spar, and squats of black ore—looking very kindly. The tributers pitch continues to look well.—West Mine: Nothing cut.

MOLLAND.—T. Bennetts, March 6: The water is now up to the 32, but I do not think it will rise above its back before the engine goes to work again. The stopes in bottom of the 20 east are producing 1½ ton of ore per fathom. The boiler to all appearance has been put in good repair, and was tested on Monday afternoon at 120 lbs. pressure per square inch, and is consequently considered safe to work with; we heaved it in the boiler-house yesterday, and are now fixing it in its place, preparatory to building in the flues, &c., and with good speed with our workshop, the engine will be put to work by Saturday next. The carriers are taking the ore to Barnstaple.

NANTEOS AND PENRHIW.—H. Boundy, W. Paull, March 2: This being our pay and setting-day, the following bargains were set:—The engine-shaft to sink below the deep adit at Eystumtean by nine men, to the depth of 11 fms. 2 ft., or 5 fms. deeper, at 18l. per fm. The stope in back of this level, and east of No. 3 rise, by six men, at 3l. 3s, per fm.; the lode yields 15 cwts. of lead ore per fm. The stope in the same level, and west of rise, by six men, at 3l. 3s. per fm.; the lode yields 8 cwts. of lead ore per fm. The level to drive west of No. 2 rise, by four men, at 5l. per fm.; the lode yields 8 cwts. of ore per fathom; we may here remark that the lode in the deep adit, which is 10 fms. below this point, has not yet been seen; should this ore continue, we purpose shortly to cross-cut in the adit level. Reece's level east is suspended for the present, not having the means of discharging the stuff, these men will be put to stope in back of this level. Rowe's level to drive west of No. 1 rise, by four men, at 5l. per fm.; the lode is very wide, composed of mundic, blende, and lead ore, yielding probably 8 cwts. of the latter per fm.; two men to stope in back of this level at 2l. per fm.; the same may be said of the stope. The stope in back of this level, and west of No. 3 rise, by four men, at 2l. 10s. per fm.; the lode yields 10 cwts. of ore per fm. The stope, east of ditto, to four men, at 2l. 10s. per fm.; the lode yields 9 cwts. of ore per fm.—Bwlchgwyn: The 30 east, by four men, at 3l. 10s. per fm.; the ground here is becoming more settled, and the lode yielding stones of ore occasionally. We have 30 men working on tribute, price varying from 6l. 15s. to 7l. 10s. per ton. No setting with them to day, as they took for two months. Our wheel, &c., in the deep level is working remarkably well. All surface machinery is in good working order. We hope to be able to sample from 20 to 25 tons of ore on Monday, the 11th inst. I will send you the monthly form, with the numbers employed, &c., by to-morrow.

NANT-Y-IAGO.—March 2: The lode in the 10, east of engine-shaft, has improved in appearance, the north part of which is interspersed with blende and lead ore; and from the appearance of the lode in the level above it is reasonable to expect satisfactory results from further development. The same level west is poor; when it is extended 2 fms. more it will be under the ore seen in the bottom of adit; should this continue in depth it will throw a new feature in the mine at this level. I have placed two men to drive in search of the lode east of cross-course, where I believe we shall soon discover it. The lode in the adit level, on the south lode, is small, and chiefly consists of flookan and clay-slate, with small pieces of solid ore occasionally; unless the lode improves in a short time I shall place the men to sink on the ore in deep adit, west of the engine-shaft. Samples of blende will be forwarded to the smelters this week, and the lead ore lying on the mine shall be made marketable as soon as possible; the quantity, I think, will be 7 tons, or thereabouts.

NETHER HEARTH.—W. Vipond, March 1: The end of the level continues much as usual, with the exception of the bottom part, which is more mineralised, and from which we have broken to-day a few small samples of brangled ore. I think from appearances we shall have an improvement in this end again shortly; it is set to four men to drive, at 37s. per fm. There is no change to notice in the working below adit, nearest the end, since my last; this is set to two men to stope, at 45s. per fm. The working, further back, was set two men, at 47s. per fm.; we have holed this working to-day to the level, where we last cut the vein. I shall set these men a new bargain next week, to stope the back of the vein, which is worth about 8 cwts. of ore per fm. We have began to dress the ore this week, and if the weather continues favourable we shall soon have it ready for sale.

NEW WHEAL FRANCES.—C. Carkeek, March 7: Our 10 fm. level west is further improved; it is now worth 25l. per fm., and over it is still improving; this is the best course of tin I have ever seen. No change in the shaft or any other bargain since last reported. I will send a full report next week.

NORTH BASSET.—T. Glanville, G. Davey, March 6: In the 142, east of the flat-rod shaft, the lode is 2½ ft. wide, producing saving work for copper ore. We have suspended the driving of this level for the present, and put the men to rise to communicate with the winze sinking below the 132. In the 92, east of Grace's shaft, the lode is 2 feet wide, producing stones of ore. In the 92 west the lode is 2½ feet wide, yielding 1½ ton of ore per fathom. The lode in the 82 is worth 30l. per fathom.

NORTH CLIFFORD.—J. Hodge, March 4: Having carefully surveyed the above mine, I herewith beg to hand you the following report thereon. The mine is situated near the village of Chacewater. The sett is very extensive, and contains eight or nine known lodes, besides cross-courses; the lodes are large and well defined. At some very remote period the have been wrought on to a great extent, and no doubt large quantities of both tin and copper ore raised. This work consisted of driving adits, sinking shafts, &c., to a depth of about 12 or 14 fms. A former company brought up an adit from below the village of Chacewater, through which all the surface water is drained. The present operations are now confined to cross-cutting from a trial or adit shaft, north and south, to intersect two lodes; there are about 5 fms. yet to drive to reach the south lode, and about 8 fms. to reach the north lode; this lode underlies north, the south lode underlies south. Between these lodes is another large tin lode. From the nature of these lodes seen at the shallower level, where they produced good work for copper ore (although this trial will not be a sufficient guide) I feel very confident that the cutting of the lodes will not only be productive, but throw a great light on future operations. There is a large elvan course running through the sett, which will form a junction with the east and west lodes. At this junction I have no doubt but that great deposits of mineral will be met with. As yet these lodes are not being wrought on easterly. On the west, however, they are being wrought on in Great Wheal Busy. Taking into consideration the congenial strata, also the lodes being productive immediately to the west of this, I am of opinion that, with a fair outlay, properly laid out, North Clifford will at no distant date prove to be a progressive mine. For its future and permanent development I advise a steam-engine to be erected about 150 fms. to the east of the present workings; this will be near the junction above referred to. Here an engine-shaft should be sunk to a depth of, say, 40 fms., then cross-cut to the lodes. The result of such trial, I am confident, will prove highly remunerative to the adventurers.

NORTH DOLCOATH.—J. Vivian, March 6: The engine-shaft is now down 2½ fms. below the 20; the lode is just the same as last reported on. In the 10, north-east on the caunter lode, we have recently met with large lumps of mundic, but have not yet intersected the east and west lode; the ground in the adit north is much the same for some time past. We have not yet got the plunger-lift from East Alfred Consols, in consequence of an accident in that mine; however, we are promised to have it to-morrow, when we shall fix it with all practicable dispatch.

NORTH DOWNS.—F. Pryor, March 11: I have just come up from underground, and am glad to say the bottom end east is worth 40l. per fathom. There are also good stones of ore in the shaft.

NORTH FRANCES.—F. Pryor, March 4: There is no change to notice in the engine-shaft. The shaftmen formerly employed in sinking Hunt's shaft are now engaged in driving east and west at the 60. The lode in the western end is 2½ ft. wide, with such an appearance as induces me to expect a change for the better. In the 60 east the lode is improving, being now 2 ft. wide, and producing a little grey and yellow copper ore. From its appearance we hope to speak of a further change shortly. I hope by to-morrow to be able to draw from Hunt's shaft by the steam-whim.

NORTH GREAT WORK.—J. Vivian, March 6: Since the meeting in October last the south lode in the adit end east has become small and of little value, having been disordered by cross branches. The stopes in the back have also fallen off in value, in addition to which must be remarked the recent fall in the market price of tin. The shallow adit end has been suspended for the time, in order to reduce the labour cost. The most important feature at present in connection with this lode it at the western whim-shaft, where the lode has been taken away by the old workers for more than 30 fathoms in length east and west of the shaft, and in height nearly to the surface. We are informed that the shaft was sunk 11½ fms. below the adit, at which depth the lode is reported to have produced tinstuff worth about 15s. per ton, which stuff, at the present range of prices, would be worth (say) 30s. per ton. By clearing and drawing this shaft we should lay open the lode in the immediate vicinity, and also be enabled to work to advantage the tin ground through which we have passed in the adit, and from which we have sold about 1400l. worth of tin in the stone. In the shallow adit end, on the north lode, the lode is small and unproductive; now distant about 17 fms. from the great caunter lode. This end should be pushed on with all speed, as the junction with the caunter lode will probably prove a point of the greatest importance, large quantities of tin having been raised by old workers from the same point in shallow workings. The stopes in back of the adit, on the south lode, will, we think, produce considerable quantities of tinstuff, which might be returned to advantage in ease we were provided with stamping machinery and a burning-house, but which will hardly pay to sell to the purchasers of tinstone. Under these circumstances, we have made enquiries, and find that there is a small stamps to let within about a mile of the mine, with a burning-house attached, which we believe may be had for about 17l. per year, and which would just suit our purpose for the time. We have now on the mine about 35 tons of tinstuff, which, if returned by ourselves, would realise at the present price of tin probably 50l.; but which, if sold in the stone, would fetch little more than 20l. The cost of carriage from the mine to the stamps would be about 1s. per ton. We have also on the mine ready for sale about 4 tons of copper ore, or nearly 30l. worth. We particularly wish to know if the shareholders are willing to make the necessary outlay to clear the western whim-shaft, alluded to above, in order to open the tin ground passed over in the bottom of the adit; and in case they are we should advise the suspending of the driving of the adit end east, on the south lode, and putting the men to work in the said shaft. At the same time, to keep the stopes going, and having secured the stamps and burning-house, we should return all the tinstuff raised, and realise considerably more than by selling the same in the stone; and by laying open the ground to a greater depth there will be a fair chance of meeting with richer deposits of mineral than heretofore, and of developing the discoveries already made. In conclusion, we must draw attention to the fact, that as time will be required to carry out the specified operations before we shall be in a position to make returns of importance, an outlay will be required of (say) from 400l. to 500l., to provide for the monthly labour cost and other expenses.

NORTH HALLENBEAGLE.—J. Crase, March 2: Bingley's engine-shaft is now cut down to the deep adit, and we are preparing the cistern-plat. If the weather permits we shall finish the walls of the engine-house by Thursday next, when we shall proceed immediately to fix the engine. The foundation for the stack is cleared out, but the stones from the quarry which built the engine-house will not do for the stack, but I am happy to say that I have found a quarry near the mine that will do, and we shall lose no time in getting on with it. I am also happy to say the lode at the north tin shaft—the shaft sunk by the Tregullow Consols Company—is much improved going west; the lode is larger and richer than I have seen it before, so that the tin is dipping west in our ground, and not east, as reported by the Tregullow party. Our progress this month, in spite of rain and frost, has been very satisfactory. My advice to you, the directors, and shareholders in your neighbourhood, is not to sell at anything like present prices.

NORTH LAXEY.—R. Rowe, Feb. 28: The lode in the 27 end in the last 6 ft. of driving has not been near so good for lead, but I am glad to say there is again an improvement to-day. The lode has been small; it is now 3 ft. wide, with a small rib of ore up and down the end. Immediately over this place in the level above we encountered a range of hard spar about 2 fms. thick, which nearly destroyed the lode, and leaving no trace of ore in it, but the 27 shows an improvement at this junction, and we have actually ore where we had none above. The lode in the 38 is 1 ft. wide, and is now yielding good stones of ore.

NORTH MINERA.—W. T. Harris, March 6: The cross-cut in 35 yard level east has been driven south, on course of the flat, 2 fms., yielding on an average 10 cwts. of lead per fathom, and at present worth 8 cwts. per fathom; the end consists of chert, with occasionally strings of lead; this cross-cut will not only prove the extent and productiveness of this flat, but will intersect other parallel lodes south of this end, one of which we expect to cut shortly. The 35 yard level has been driven east of Williamson's winze nearly 3 fms., producing from 5 tons to what it is worth at present—2½ tons per fathom; this level is within 9 ft. to communicate with the level driving west of Charles's shaft; and although the lead is not quite as good in the back as at the beginning of the month, in consequence of getting almost through the course of ore, it dipping east, the bottom of the level is as good as ever. The end driving west of Charles's shaft, in this level, has been extended nearly 2 fms., the lode producing from 10 cwts. to what it is worth at present—2½ tons of lead per fathom; this increase in value as we extend west accounts for the lead rising in that direction, it being at the commencement of the level 6 inches high, and gradually rose to 3½ ft., hence the increase in this and falling off in the 35 yard level; but this does not depreciate the value of the mine, its being always anticipated previous to a communication with Charles's shaft, which when completed will be of great importance to the bottom part of the mine, and lay open a splendid piece of ground, in a most advantageous manner for taking away. We shall also then resume sinking Charles's shaft below the 35 yard level, in the bottom of which we have a lode worth 4 tons of lead per fathom. The 25 yard level has been driven west of Pugh's shaft about 2 fms., through unproductive but kindly ground. In bottom of the 25 yard level, west of Williamson's winze, we have stoped 3 fms., the lode and portion of the flat carried, which is 7 ft. wide, producing 2 tons of lead per superficial fathom. In back of this level, west of shaft, we have stoped nearly 4 fms., producing from 1 to 1½ ton per solid fathom. Pugh's level, in back of the cross-cut driven north of this level, we have cleared up an old shaft 5 fms., and sunk the same 9 ft., through beds of chert and shale, finding often good stones of lead; we have about 2 fms. more to sink to communicate this shaft with the cross-cut, thereby rendering this level available, with ventilation for any operations thought proper. Jones's shaft has been cleared up and timbered 6 fms., leaving 3 fms. to cut down to the bottom; we anticipate making good returns from this shaft when down, there being good lead known to be standing in the ends and bottom of it. The cross-cut driving north of Thomas's level has been extended about 2 fathoms; the ground is tight for progress, and letting out a little water, which I consider indicates we are within a short distance of a change for the better.—Twll-y-Cwm: The cross-cut has been driven east 9 ft., the ground being thickly impregnated with lead, consequently I am daily expecting to cut something important. Lankshear's level has been extended 2 fms., the ground being easy for progress, and producing excellent cubes of lead; from the character I anticipate an improvement shortly in this place. On the whole, the prospects underground are very encouraging, especially at Pugh's shaft. On surface we have completed and started the engine, waiting only for the completion of the large crusher, with which we are very busily engaged, and hope to have it ready for working in a fortnight from this time, set pithead, pitwork, &c., at the shaft; we shall then work the engine regularly, and make such returns that will, I think, surprise the public, and benefit the shareholders, and do many other things which we are at present unable to do. We have made new slides, set buddles, built house for clean lead, and made many additions to our dressing department; we have also about 35 tons of lead dressed; in course of dressing, 7 tons; on surface to dress, 30 tons; underground broken, 10 tons=82 tons, and have employed underground 44 men; and on surface, 40=84 men. In conclusion, I beg to say every possible effort is being made to bring our erections, &c., on surface to a close; and in every department the strictest economy is observed.

NORTH ROSKEAR.—Joseph Vivian, Feb. 27: Western District—Copper Department: The lode in the 194 fm. level west is about 2 feet wide, and producing good stones of ore. In the 184 it is about 2 ft. wide, kindly, and producing a small quantity of ore; this end is to within 25 fms. of a very good run of ore ground standing in bottom of the 174 for about 20 fms. in length. In the 174 the lode is 2½ ft. wide, and worth about 8l. per fathom. There is a winze being sunk below the 164, about 3 fms. before the 174, now down 4½ fms.; present bottom orey, the upper part worth 20l. per fathom. The 164, 152, 140, and 90 fm. levels are opening up a large lode, producing a small quantity of ore, but presenting nothing worthy of particular notice; yet as we have a large quantity of unexplored ground before our western levels, there are chances of our making good discoveries by pushing them on vigorously. No levels driving east in this district.—Wheal Crofty, or Eastern District: This part of the mine is traversed by a great many lodes and branches, on which we are exploring in search of copper at five different levels, but have not at present anything in either of them worthy of particular notice.—Tin Department: Our returns under this head are principally from this part of the mine, where we have a very large amount of ground laid open, but the work is of low produce and the ground hard, thus creating heavy cost to bring the tin to smelting-house. The stopes in the backs of the 120, 105, 94, and 84 fm. levels are worth on an average from 18l. to 20l. per fathom, lode averaging from 10 to 15 ft. wide. In a winze and stopes under the 120 west the lode is about 8 feet wide, and worth from 25l. to 30l. per fathom, and looks likely to improve in depth. The 140 is about 15 fms. behind this run of ground. In consequence of a breakage at North Crofty, about seven weeks since, the water has been flowing from that mine into this, and has covered the best of our tin ground during the last five weeks; this, coupled with the bad weather, will bring us short of our estimated quantity of tin for next credit.

NORTH WHEAL ROBERT.—J. Richards, March 7: In the 42 west, east of Gorman's cross-cut, on No. 1 south branch, the branch is worth ½ ton of ore per fathom. In Weymouth's rise and stope in back of the 30, east of Edwards's cross-cut, on No. 1 south lode, the lode is worth ½ ton of ore per fathom. In the 30 west, and west of Edwards's cross-cut, on No. 1 north lode, the lode yield good stones of ore. In Crowle's winze sinking below the 30, on No. 1 south lode, the lode is not so good; it is, however, 3 ft. wide, and yields good stones of ore. The trial shaft is in regular course of sinking below the 62 in favourable ground for progress; the lode is 2 ft. deep wide, composed of

quartz, and occasionally a little ore.—Trial Shaft: In the 42 east, on No. 2 south lode, the lode is 15 inches wide, and contains a little ore.

NORTH WHEAL TRELAWNY.—Henry Hodge, March 5: The lode in the 65 fm. level is 15 in. wide, producing 3 cwts. of lead per fathom. The winze sinking under the 54 fm. level is communicated to this level. There is nothing new in any other part of the mine.

NORTH WREY.—S. Kemp, March 7: On Saturday (our pay and setting day) the following bargains were set:—The engine-shaft to sink below the 38 by eight men, 9 fms., to fix standing-lift, and to complete the shaft to the 50, for 86l., as per bargain. The lode in the shaft continues of the same character as last reported on; the landing is set to two men for 6l. 15s. per month. The 38 north is set to four men, 4 fms. (or the month), to wheel and fill their own stuff, at 3l. 10s. per fm. The lode in the present end is 2 feet wide, producing good stones of lead ore, and appears to be gradually improving as the drivage proceeds. The engine has reached here in good condition.

OKEL TOR.—W. B. Collom, March 7: In the 80 the lode in the end and stopes will yield from 5 to 6 tons of ore per fathom. In the 65 we have commenced driving east on the orey part of the lode discovered in the end. This part of the lode is 6 feet wide, and will yield about 6 tons of ore per fm. In consequence of the water we have been compelled to suspend sinking the winze in the bottom of the 65 until the same is drained away by the drivage in the 80. The various stopes and rise in the back and bottom of the 50 are looking well, and yielding ore of a better quality, the average of the whole being full 6 tons per fathom.

OLD TOLGUS UNITED.—G. Reynolds, March 7: By perseverance we have now drained the mine of the water which flowed on us by the choking of the adit, and now we shall force on the 52 cross-cut, and every other department, with all speed, and hope in my next report to be able to give a satisfactory account of the nature of the extension and prospects of the 52 cross-cut. The tribute pitches throughout the mine are merely the same as for some time past.

PEDN-AN-DREA.—Wm. Tregay, J. Thomas, March, 2: The water has been into bottom of sump all the early part of the week in consequence of breakage of cap of air-pump bucket, and such heavy influx from the floods; in fork again on Thursday, and kept so since then. In the 110 east no change. In the 100 east end the cross-cut into the lode is producing good quality tinstuff; no north wall. In the winze in bottom of this level the lode is worth 20l. per fm. The 90 winze is worth 10l. per fm. In the rise in back of this level we have not been able to have the lode taken down on to the footwall as anticipated, owing to an accumulation of stuff in this level, which we hope to have cleared away next week. In the 90 cross-cut no lode cut.—Cobbler's: The shaftmen are employed about the skip-road, which will be pressed to completion as fast as possible. The 68 west is worth 6l. per fm.—Street and Bragg's: In the 47 east the lode is opening out larger, and promising improvement.

PELYN WOOD.—R. Ware, March 7: The lode in the 10 fm. level south is 3⅛ ft. wide, improving as we near the No. 1 east and west lode. In the 10 fm. level, north of engine-shaft, the lode is 2⅛ ft. wide—spar, mundic, and flookan. Other parts of the mine as last reported.

PENCRAIG.—Capt. Roberts, March 4: About 12 tons of ore have been already raised, and nearly ready for the market. By the end of the month we hope to have 20 tons raised. Everything is going on orderly, and the ore continues good.

PENDEEN CONSOLS.—W. Edey, J. Warren, March 2: The sumpmen are going on satisfactorily in the sump-shaft, with an improvement in the lode. In the 118 north the lode has improved, now worth 20l. per fm. We have also communicated this end with No. 1 sump-winze, which will now give us good ventilation, and a fair chance in working our ore ground at this level. All our other work without any change.

PENHALDARVA.—Stephen A. Pope, March 7: There is no alteration since last week. The men are engaged in altering pitwork, fixing boiler, &c., which we shall accomplish as fast as possible.

PROSPER UNITED.—W. H. Martin, March 7: We still continue to sink on Murchison's lode, the character of which is not much changed; it is producing some rich ore, with mundic in the gossan. Good progress is being made in bringing up the adit from the valley; the ground is favourable for excavating, and let at 15l. per fathom. This adit is so far advanced that we expect to see the back of Hosking's lode in the course of a few days. Gryll's's shaft is collared up complete. At Louisa's engine-shaft the men are engaged cutting bearer-holes, &c., for the drop-lift. The engineers are getting on pretty fast with fixing Louisa's pumping-engine, and we hope now to make good progress at Hosking's, as they have commenced supplying us with the engine from the foundry. The masons at present are engaged building the boiler-house at Louisa's, and the stack at Hosking's.

REDMOOR.—T. Taylor, March 6: The 80 end, west on Johnson's, is worth about 8l. per fathom. The 70 west is worth about 10l. per fm. The pitch in back of the 70, west of cross-course, is a little improved. No other alteration worthy of notice.

RHEIDOL.—Rhurruggus deep adit level east is much improved in appearance; the lode is 18 in. wide, of a strong mixture of blende, and there is a large quantity of water coming from the end. In No. 1 rise, in back of the level, the lode is yielding from 2 to 3 tons of blende, and 5 cwts. of lead per fathom. In Midway level, driving east, the lode is about 18 in. wide, of a strong mixture of blende. In No. 1 stope, east of No. 6 rise, the lode is yielding 3 tons of blende, and 5 cwts. of lead per fathom. I have resumed, with two men the getting of the orey stuff broken down in the old workings, which will pay well for working. In Nantglass deep adit level, driving on the course of the lode, it is 6 ft. wide, composed of spar, blende, and strings of lead occasionally.

ROSEWALL HILL AND RANSOM UNITED.—E. Thomas, March 7: The lode in the 120 end, east of the sump-shaft, is producing a small portion of tin, but at present not enough to value; notwithstanding, there is a good probability of this end improving as it advances towards the elvan. The 110 is suspended for a short time for the purpose of sinking a winze for ventilation. The ground in the Ransom engine-shaft (below the 100) is easy for sinking, the lode in which is of a very promising nature, worth for the length of the shaft (9 feet) from 18l. to 20l. per fathom. The prospects at this point are cheering; the lode in the end, west of said shaft, is somewhat contracted at present, worth 5l. per fm. We have resumed driving the end east at this level, the lode in which has a promising appearance. The lode in the 70 east is of a more promising character than it has been for the last 9 feet driving, now worth 8l. per fm., and from present appearance it will soon be worth its former value. This end is being driven through several fathoms of good ore ground; the lode in the winze below this level, east of the Ransom, is worth about 6l. per fm. The lode in the winze, sinking below the 60, is about the same in value as for some time past, worth 8l. per fm. We have driven over, at this level, from 15 to 20 fms. of ground, varying in value from 17l. to 20l. per fm., and, judging from this, and from the level below, the probabilities are that we shall open up here a great many fathoms of good profitable ground. The lode in the 60 east is worth 6l. per fm. Our tribute departments is a little improved.

ROSEWARNE UNITED.—H. Woolcock, March 7: The 90 is driven west of footway-shaft 6 fms.; the lode is 2⅛ feet wide, composed of killas, peach, spar, and occasional stones of copper ore. We shall complete Jennings's shaft to the 90 to-day, and begin to cut plat; after this is done we shall commence to drive the 90 east, where we hope shortly to have a course of ore, judging from the ground driven through in the 80. At Richards's shaft, sinking below the 58, west of Richards's lode, the lode is 2½ ft. wide, producing occasional stones of copper ore. In the 34, west of Bush's shaft, no change to notice since last reported on. In the 46, east of Lane's shaft, the lode is 2 feet wide, producing a little ore. In the 34, east of Lane's shaft, the lode is 18 in. wide, with a promising appearance. In the 22, east of Lane's shaft, the lode is 20 in. wide, yielding a little ore. No alteration in the tribute department since last week.

SIGFORD CONSOLS.—Wm. Hosking, March 6: I cannot report any change in this mine during the last fortnight. At the engine-shaft the lode maintains its size, being about 4 ft. wide, producing good work for copper. The cross-cut driving to intersect the north copper lode is progressing favourably.

SORTRIDGE CONSOLS.—R. Jackson, March 7: At Hitchins's engine-shaft, in the 110 east, the lode is 2 ft. wide, yielding stones of ore. In the 62, driving north, west of western cross-cut, no lode has been met with. In the 50, driving east, on No. 2 south lode, the lode is small and unproductive. In the 50, driving west, on No. 2 south lode, the lode is 1 ft. wide, yielding stones of ore. In the 50, west of Crewe's cross-cut, the lode is worth 1 ton of ore per fm. In Head's rise, in back of the 50, west of Crewe's cross-cut, the lode is worth 1⅛ ton of ore per fathom. In the 40, driving east, on No. 2 south lode, no lode has been taken down. In Dunn's rise, in back of the 40, on No. 2 south lode, the lode is worth 1⅛ ton of ore per fm. In Blanchard's stopes, in bottom of the 40, on No. 2 south lode, the lode is worth 2⅛ tons of ore per fathom. In Rowe's stopes, in back of the 40, on No. 2 south lode, the lode is worth 2⅛ tons of ore per fm. In the 30, driving east, on No. 2 south lode, no lode has been taken down this week. There is no change to notice in any other part of the mine.

SOUTH CARADON WHEAL HOOPER.—W. C. Cock, March 2: We have commenced cutting the plat, &c., at the bottom of the shaft, which together with casing and dividing the shaft, fixing the lift, putting in penthouse and plat sollar, and making all the necessary arrangements for sinking below, is set for the sum of 45l. We have broken some small stones of copper ore in cutting the plat. The other places are without change. We have about 5 ft. more to reach the lode in the 62 cross-cut, which I hope we shall complete by this day week.

SOUTH CARN BREA.—T. Glanville, March 6: In the 20, driving west of the flat-rod shaft, the lode is composed of gossan and tin—saving work. In the 30 east the part of the lode driving on is worth 30l. per fm. In the 40 west the part of the lode driving on is worth 30l. per fm. All the other levels driving throughout the mine are producing good work for tin.

SOUTH CONDURROW.—W. Richards, March 2: The engine-shaft is now down 10 fms. below the 15; lode 5 ft. wide, composed of spar, quartz, and spots of malleable copper. In the 15, east from engine-shaft, the lode is 3 ft. wide, with spots of grey and yellow copper ore, but not to value. In the deep adit, west from engine-shaft, the lode is 2 ft. wide, unproductive; in the same level, east from Thomas's shaft, the lode is 2 ft. wide, with gossan, and impregnated with yellow copper ore. In the deep adit, west from cross-cut, the lode is 3 ft. wide, impregnated with grey and yellow copper ore, but not to value.

SOUTH CRENVER.—E. Chegwin, March 5: In the 105 east the lode is 2 ft. wide, producing stones of copper ore, and the ground more favourable for driving. Our tribute pitches in bottom of the 105 are looking well.—South Mine: In the 51 cross-cut, driving south of new south shaft, the ground is favourable; we expect in about 2½ fms. more driving to see the middle lode.

SOUTH DOLCOATH AND CARNARTHEN CONSOLS.—Wm. Roberts, March 5: Tutwork Setting: The 50 to drive north, by six men, at 11l. per fm. The adit west, by four men, at 2l. 15s., and the adit east, on the caunter, by four men, at 7l. 10s. per fm.; the lode in the end 1 ft. wide, with stones of grey ore.

SOUTH WHEAL KITTY (Lelant).—S. Mitchell, March 2: This being our pay and setting-day, I beg to inform you of a very important discovery made here a few days since. We have commenced sinking a new shaft from surface, now down about 4 fms.; the lode in the shaft is 3 feet wide, well defined, and worth full 18l. per fm. I have not seen for the last 30 years anything to equal it at the present depth; the shaft is going down in whole ground, no level being driven so far west as this. We find the adit rather troublesome for clearing, owing to so much water issuing from the old workings; the lode is nearly all taken away in the back of the level, with the exception of some arches left by the old men; this I deem a very important feature. The ground is all standing whole in the bottom, and I hope we shall soon reach the present end, when good results will be realised. In conclusion, I beg to say it is my decided opinion that there is only machinery required to put this mine in a position second to none of its rich neighbouring mines.

— S. Mitchell, jun., March 6: I beg to inform you that the lode in Webb's shaft is still improving. It is not so hard, and composed more of red granite, very congenial for tin. This is the same sort of ground they have raised all the tin from at Wheal Margaret. I can assure you, if the lode continues to improve, the shares will be worth 20l. each before long, instead of 20s. I can only say I have not been so well pleased with the prospects of the mine since I first saw it as I have been to-day, not only because the lode is much richer, but for its nature as well.

ST. DAY UNITED.—E. Ralph, March 2: There is nothing new in these mines since last report. The water is in fork to the bottom levels at Billing's and the men at work, and 5 fms. below the 128, at Bissoe Pool. Engine working well. Our next sale of tin will be a good one.

ST. IVES WHEAL ALLEN.—H. Taylor, March 7: No alteration to notice in the 50 east nor west of Giesler's flat-rod shaft since last week. The lode in the 40 east is 15 in. wide, and worth 8l. per fm., with a good appearance. The lode in the 40 west is 18 in. wide, producing some good tinstuff. The 40, east of Louisa shaft, is not yet driven into the tin ground; we have about 4 fms. more to drive. We have set the stopes in the back of the 40 on tribute, at 10s. in 1l., and the pitch continues to look very well. The lode in the 20, east of Louisa, is still disordered by a hard bar of ground; we calculate soon to get through it. The lode in the adit east of Highborrow shaft is small at present, but producing some rich tinstuff. In the deep adit north of Highborrow shaft, on the cross-course, we have cut a branch, but cannot say much about it yet, as we have only just intersected it. The lode in the winze sunk below the 40 is 2 ft. wide, producing tinstuff, but cannot as yet say its value. We have fixed lift in Roderick's engine-shaft, and have drained the water about 3 fathoms, and expect in a day or two to fork to the bottom, when we shall commence to sink with all speed. We have taken out the foundation for the steam-whim and stamping-engine, but the weather has prevented our beginning to build. We shall commence in the coming week, and, provided the weather be fine, it will not require long to complete the building. The general points of the mine look very encouraging; still the ends are not so productive as a few days since. Changes are ever taking place in mining; but, so far, we have strong reasons for being well satisfied, in consequence of having numerous places to operate upon when the steam-stamps is ready to work; and you may rely that no time shall be delayed when the weather will permit the masons to build.

TOLCARNE.—March 6: The lode in Field's shaft, below the 20, is 18 in. wide, consisting of gossan, spar, and spots of grey ore. The lode in the 20 end, east of shaft, is 18 in. wide, consisting of gossan, spar, and good stones of grey ore—a kindly looking end. The lode in the 20 end, west of shaft, is 14 in. wide, consisting chiefly of spar and mundic, and is letting out a little water. The lode in the 10, east of shaft, is 1 ft. wide, yielding 1 ton of good ore per fm. The lode in the 10, west of shaft, is 10 in. wide, unproductive. We have taken the men from the adit end, east of shaft, and have put them to sink a winze in the bottom of the adit, 28 fms. to the east of Laity's winze; the lode is 15 in. wide, consisting of gossan and spar. In the adit end east, on Chegwin's lode, the lode is 14 in. wide, consisting chiefly of gossan. In stripping down the western side of the adit cross-cut, on the tin lode, we find it will produce rather more tin than when last reported, worth about 40l. per fm. for tin.

TREGARDOCK.—Capt. Goldsworthy, March 5: The lode in the deep adit end is 2 ft. wide, composed of soft spar, prian, and a little mundic; it is a very pretty lode indeed, although it is of no value. I hope we shall soon have an improvement here, as we cannot be far from the junction; the end is now 105 fms. east of the shaft.

TREGULLOW CONSOLS.—J. Hodge, March 4: This sett is very extensive, being about one mile in length on the course of the lodes, as many as seven or eight are known to traverse the entire length. In the western part of the sett, on what is termed the south lode, a shaft is sunk about 12 fms., in which a good lode for tin was met with; this shaft was unknowingly sunk in the North Hallenbeagle sett, and was consequently abandoned by this company. To the east of this shaft about 100 fms. another shaft is being sunk, now down about 10 fms.; here the lode is expected to be cut at a depth of 16 fms. Just above the bottom of the shaft a lode has been met with about 2 feet wide, underlying north, with stones of tin; still further east two other shafts are sunk on this lode. The component parts here are excellent gossan and stones of tin, which leave no doubt that at a deeper point a valuable lode for tin will be discovered; five or six of the lodes are within a short distance of each other, and are commandable by cross-cuts from an engine-shaft. North Treskerby and Scorrier Consols Mines are situated on the south, and on the west is Hallenbeagle, also Stencoose and Mawla; here steam-engines have been and are being erected, thus showing the locality to be a productive one. In conclusion, I beg to say although the course of tin met with is in the North Hallenbeagle, there is every reason to expect similar results in Tregullow Consols. The lodes are embedded in a good stratum, and will, no doubt, with proper management, prove a lasting mine. Further information relative to this property is yours at command.

TRELOWETH.—C. Lobb, W. Rosewarne, March 2: The lode in the engine-shaft, sinking below the 134, will yield 3 tons, worth 18l. per fm.; the eastern end of the shaft is daily improving as we get down; we are at present 6 ft. below the 134, and should have been down further, but for six of our men having been engaged in cutting ground to fix plunger-lift at the 124. In the 134 end east we are still engaged in cross-cutting south in search of the south part of the lode, but at present have not cut anything like the lode we have in the stope in back of the 134, but 9 ft. from end. I very much regret that we have not been able to explore faster in the 124 west; we have now cross-cut in the lode 5 ft. south of our 124 end, as we formerly called it, on the north part of the lode; we have no appearance of any south wall, and the end is worth 20l. per fm. The lode in the 124 end east will yield 2 tons, worth 16l. per fm. The winze sinking below the 124 east will yield 1⅛ ton, worth 8l. per fm. The stope in back of the 134 east is worth 16l. per fm. The stope in back of the 124 east is worth 12l. per fm. The stope in bottom of the 116 east is worth 30l. per fm. The ore appears to be making east in good ground for taking away; present price for stoping 4l. 10s. per fm. We have suspended the stope in back of the 116 fathom level. We have changed the heads of the side rods, &c., as well as changed bishop-head and main pin of the angle-bob at the 60, and the engine has gone to work well. In conclusion, we beg to remark that we are getting on well with breaking the ore, and have no doubt, from present appearances, we shall be quite up to, if not exceed, the estimate sent you this week.

— T. Richards, March 7: The lode in the engine-shaft, sinking below the 134, will yield 2½ tons, worth 15l. per fm. In the 134 end east we are cross-cutting south in search of the bunch of copper ore we have in the stope in the back of this level. We have cut through the lode in the cross-cut at the 124 west. The lode in the end driving east of the cross-cut west at the 124 is worth 20l. per fathom. The lode in the end driving west of cross-cut west at the 124 is worth 10l. per fm. The lode in the 124 end east is worth 16l. per fathom, and looking well. The lode in the winze sinking below the 124 east is worth 8l. per fathom. The lode in the stope in the back of the 134 east is worth 12l. per fathom. The lode in the stope in the back of the 124 east is worth 10l. per fathom. The lode in the stope in the bottom of the 116 east is worth 30l. per fathom. About the 14th inst. we purpose putting the flat-rods to work, and cut the lode west of the cross-course, at Woodfall's shaft, in the 10.

TRETOIL.—R. Rich, March 6: Since I wrote you yesterday we have tried samples from the lode which has been cut into north of the level, near the end, in the 24 from surface 9 fms. above adit; the lode, as far as it is cut into (2 ft.), will produce very good work for tin. There appears to be a great deal of lode yet to the north, which we shall cross-cut and cut out by six men. This discovery of tin is many fathoms west of where we have raised tin before; should it open out, as we have reason to expect from present appearances, it will greatly enhance our prospects, there being great facilities to operate on this discovery at the various levels.

TRENCROM.—R. Hollow, F. Bennetts, March 7: In the 90, east of the cross-course, east of the engine-shaft, the lode is worth 3l. per fm. In the winze sinking below the 80, east of the engine-shaft, the lode is worth 4l. per fm. In the 80, east of the engine-shaft, the lode is of a kindly character, producing low quality ore. In the 80, west of the engine-shaft, the lode is of a promising character for improvement. The winze sinking below the 70, east of the engine-shaft, is opening tribute ground. The 60 cross-cut south, clearing on the cross-course, east of the engine-shaft, is more favourable for clearing. In the 40, east of the engine-shaft, the lode is worth 4l. per fm. In the 30, east of the engine-shaft, the lode is of a very kindly character. In the 20, east of Michell's flat-rod shaft, the lode is worth 3l. per fm. In the 20, west of Michell's flat-rod shaft, the lode is worth 4l. per fm.

TREVOOLE.—H. Stephens, J. Lean, March 7: In the 80, driving west of Harvey's shaft, on the south lode, the ground is a little harder for driving; lode worth 40l. per fm. In the 70, on the same lode, driving west of Harvey's shaft, the lode has a promising appearance, being impregnated with ore throughout. This end is 22 fathoms behind the 80. Other parts of the mine the same as last reported on.

TRUMPET UNITED.—G. R. Odgers, March 2: The engine-shaft to sink by nine men at 9l. per fm., the lode being 8 in. wide, and producing some very good work for tin; say, in money from 8l. to 10l. per fm. A bargain for two men to make a whim around the flat-rod shaft, at 35s., and the whim hauling at 3s. 6d. per eight hours. The engine is working very satisfactorily indeed. We are now busily engaged getting around the preparatory work for working the flat-rods on two other lodes, and looking out for a suitable stamps.

UNITED MINES (Tavistock).—J. Tucker, March 6: Although we only commenced sinking the engine-shaft below the 48 with the present year, yet after fixing standing-lift, taking up water, putting in penthouse, hanging tackle, and many other jobs which have no name in the contract, it is now about 8 fms. below the above-named point. It is too much to expect that the men (although still doing their best) will continue to sink as much as 6 ft. per week, as is usual, owing to their having so far to draw the stuff, but there can be no doubt as to the compiction of the contract of 12 fms., &c., in sixteen weeks, as only nine have past, and 8 fms. are sunk. The end on the cross-course, in the 18, is about the same in appearance as last reported.—Tribute: The eastern pitch, in the 48, has much improved during the last three or four weeks; the others are much as for some time past. Mr. King visited the mine yesterday, and after walking over the dressing-floors, and as much else of the property as the nature of the wet weather would admit of, we talked over all matters of importance, made calculations as to the returns, &c. I think that he (Mr. King) left the mine with the impression that we are just now passing through our gloomiest moments, which are just before daybreak.

VALE OF TOWY.—A. Waters, T. Harvey, March 5: Clay's engine-shaft, sinking below the 90, is going down rapidly; the ground between the east lode and the main lode is in large beds, and contains large quantities of blende, and considering, that from the present underlie of the lodes, a junction of the two will take place at or about the 100 good results may be expected therefrom. In the 90, driving south of said shaft, the lode has a more favourable appearance, and is yielding stones of lead ore. We expect to communicate to the winze sinking below the 80 some time this afternoon. In the 80, driving north of the same shaft, the lode is 4 ft. wide, composed of barytes and stones of ore, but not to value. In the 80, driving south of Field's shaft, the lode is about 18 in. wide, yielding occasional stones of lead ore; this end is now passing through the tye of ground seen in the level over, previous to entering the run of Paul's bunch. In the 70, driving south of this shaft, we are passing through a similar bar of ground as above referred to, and seen in all the upper levels, previous to entering the run of ore seen at and about Nant shaft. In the 60, driving south of Nant shaft, the lode is 18 in. wide, of a more promising character than for some time past. In the 80, driving north of Bonville's shaft, the lode is of great width, yielding some good orey stuff, and improving as we advance northward. This part of the mine is improving, and we think that at a greater depth we shall recover our old position here. The tribute department is yielding much as for some time past. Our next sampling will take place at the proper date—a fortnight after the pay-day.—P.S. Since I have been writing, the men have come up to say that the winze below the 80 south is communicated to the 90.

WEST BASSET.—W. Roberts, March 6: On the north lode, in the 134 west, the lode is 2 ft. wide, disordered a little, being near the cross-course. In the 114 east the lode is 2 ft. wide, composed of fluor-spar and occasional stones of ore.—Engine Lode: In the 114 west the lode is 4 ft. wide, very promising, with stones of ore occasionally. In the 94 west the lode is at present small. In the rise in the back of the 104, against Percy's shaft, the lode is 3 ft. wide, good tribute ground. The 84 west is opening good tribute ground; lode 3 ft. wide. In the 65 west the lode is 1⅛ ft. wide—tribute ground. Other parts are progressing favourably.

WEST CARADON.—W. Johns, R. Trathan, J. Williams, F. Pryor, March 2: The 155 east of cross-course, on Downing's lode, is still looking well, worth about 25l. per fm.—set to six men, at 12l. per fm. The 155 east, on Allen's lode, is producing stones of ore—set to four men, at 10l. per fm. A winze sinking below the 140, before this end, is down about 10 fms.—lode poor; we shall shortly hole this, and ventilate this part of the mine—set to four men, at 12l. per fm. The 155, west of cross-course, will soon be holed to a winze sinking below the 140; the lode in the end and winze is poor—set the former to six men at 18l. per fm., the latter to three men at 20l. per fm.; this end can be driven for a much less price when ventilated. The 104 cross-cut, north of Menadue lode, on the little cross-course, is set to six men, at 8l. per fm.; we calculate two months more will reach the lode. Here I would remark, we have a pitch working in back of the 116; the lode is worth 25l. per fm. I think we shall ere long lay out a valuable piece of ground. The 92 west, on Allen's lode, is presenting a better appearance, with good stones of ore—set to two men, at 11l. per fm. The 90 west, on Jope's lode, is poor—set to four men, at 10l. per fm. The 50, on Vivian's lode, is poor—set to four men, at 16l. per fm. The 97, on the north lode, is looking promising, worth about 10l. per fm.—set to four men, at 14l. per fm. The 80 west, on Downing's lode, is producing stones of ore—set to four men, at 11l. per fm. The 27 cross-cut south, to cut the main part of Menadue lode, is progressing favourably; the ground is looking very congenial to meet with something good when the lode is reached; we calculate 2 fms. will accomplish the object—set to six men, at 10l. per fm. In the 10 cross-cut the ground is hard, consequently the progress is slow—set to four men, at 12l. per fm. The adit level west, on Menadue lode, is not advanced far enough to get in with the run of ore ground driven through in the level below (the 10)—set to two men, at 4l. per fm. The 104, on Vivian's lode, is producing stones of ore—set to four men, at 8l. 10s. per. The winze below the 104, on Dunstan's, is sinking by two men, at 9l. 10s. per fm.; the lode is 1 ft. wide, containing ore. The 17 west, on north part of Gilpin's lode, is producing about 1 ton per fm., and looking very kindly for a speedy improvement—set to four men, at 10l. per fm. The 17 east, on the north part of Gilpin's lode, is poor—set to four men, at 12l. per fm. The 17 cross-cut north is within 6 ft. of cutting the north part of Menadue lode; the lode further west is worth 20l. per fm.—set to four men, at 10l. per fathom. Pryor's shaft is in a beautiful stratum of ground, but no lode has been taken down in the past month; the sumpmen will now commence at once to cut through the lode, to ascertain its size and value. We set our usual number of pitches, varying from 2s. to 13s. 4d. in 1l. Our sampling closes to-day, which we estimate to be about 320 tons.

WEST CONDURROW.—Geo. Bennett, Geo. Jewill: The lode in the engine-shaft is much improved, and is now 4 ft. wide, producing good stones of tin and copper; it is of a most promising appearance, and we are expecting further improvement. In the 24, east of Purser's shaft, the lode is 5 ft. wide, and producing good stones of copper; in the 24, west of Purser's shaft, the lode is 2 feet wide, and producing stones of copper ore. The 12, east of Purser's shaft, is 4 feet wide, producing good stones of ore and tin. Our operations will be extended as much as possible as the engine-shaft goes down; the shaft is now being sunk at the rate of about 3⅛ fms. per month.

WEST FOWEY CONSOLS.—W. Stephens, E. Dunstan, March 4: Western, or Tin Part: In the 100, east of Puckey's north shaft, the lode is 2 feet wide, at present poor; the lode in the winze sinking below this level is 2 ft. wide, worth 10l. per fm. In the 110 east the lode is 5 ft. wide, worth 20l. per fm. In the 125 east the lode is 4 ft. wide, worth 12l. per fm. In the 135 east the lode is 5 feet wide, worth 20l. per fm.; in the same level west the lode is 5 ft. wide, worth 15l. per fathom.—Eastern, or Copper Part: There are no alterations in this part of the mine to notice since our last report.

WEST SNAILBEACH.—J. Richards, March 7: During the last two days the water has been in the bottom of the shaft, in consequence of our main rod being broken; however, it is all right again, and the men have resumed the sinking. The north lode at the 64, driving west, is 5 ft. wide, and is yielding some good stones of lead ore. I am expecting daily an improvement here. At the same level, driving east on the south lode, it is just about the same as it has been for some time; the lode appears to be getting stronger as we go east.

WEST TREVELYAN.—J. D. Osborn, March 2: Cater's engine-shaft is sunk 6 fms. 4 ft. below the 48; ground favourable for sinking. In the 48, west of Cater's, the lode is 2 ft. wide, worth for copper ore 18l. per fm. The cross-cut driving north in the 28, is driven 17 fms.; ground favourable for driving. In all other parts of the mine there has been no lode taken down this week, consequently there is no alteration since last report.

WEST WENDRON CONSOLS.—R. Kendall, March 2: We have set the water-wheel shaft to sink at 14l. per fm., the lode is 2 ft. wide, at present unproductive. The lode in the 10, east of water-wheel shaft, is 1 ft. wide, poor. We expect to get the engine to work in a week or ten days.

WEST WHEAL MARGARET.—Capts. Uren and White, March 5: Saturday last being our setting-day, the following tutwork bargains were set:—Hallett's shaft to sink below the 20, by eight men, at 10l. per fm.; the lode here is 2 ft. wide, worth 6l. per fathom. The 20, to drive west from Hallett's shaft, by four men, at 55s.; the lode here is 2 ft. wide, worth 3l. per fm. The 20, to drive east from Hallett's shaft, by four men, at 55s. per fm.; the lode here is 18 in. wide, producing saving work for tin. The 30, to drive west from Dymond's shaft, by two men, at 4l. per fm.; lode 12 in. wide, worth 3l. per fm. Our tribute pitches throughout the mine will average 10s. in 1l.

WEST WHEAL TOLGUS.—March 2: We have to-day set Taylor's engine-shaft to sink below the adit level by nine men, at 15l. per fm.; the shaft is now down 19 fms. below the adit. A rise in the back of the 40, on the south lode, against Taylor's shaft, is set to three men and three boys, at 3l. per fm.; the lode in the rise is 30 in. wide, and consists of mundic, jack, soft spar, and good stones of ore—a very pretty, kindly lode. We have also set two pitches in the back of the 50, on the north lode, four men in each end, at 5s. 9d. in 1l. tribute each pitch; the tributers dress their ore. The lode in each end of the winze from the 40 to the 50 is on an average 2 feet wide, and if the ore continue, the men can get fair wages at the above-named tribute. We have nearly cleared out the 50, on the south lode, and we have a pare of men clearing out the 50, on the north lode. We hope to be able to say more about these levels in a fortnight. It is evident, from what we can see of the 40 and 50, that the old workers have left some ore ground behind them, and we hope a good quantity.—Wheal Raven Shaft: The sumpmen here will commence sending down the main rods from the 30 to the 50, and as soon as the rods are fixed we shall commence to drop the lift below the 50. Other things at surface are progressing as fast as the weather admits of; it has been very wet.

WHEAL AGAR.—W. Roberts, March 5: In the 80 cross-cut, south from Windstow engine-shaft, the lode has been cut through; it is full 4 feet wide, mixed with killas, spar, and yellow copper ore, producing of the latter 1⅛ or probably 2 tons per fathom. We have put the men to drive west on the lode. In the winze sinking under the 70 the lode is 2 feet wide, producing good stones of ore. In the 70 east the ground is improved, and the lode is 2⅛ feet wide, with occasional stones of ore. In other parts no alteration to notice since last reported.

WHEAL CONCORD.—Capt. Luke, March 7: There are now 30 fms. of pumps in the shaft: during the course of next week we shall have them down to the 50, when we shall immediately proceed to fork the mine.

WHEAL CREBOR.—J. Gifford, March 5: Cock's Shaft: We have cut into the main lode in the north side 2⅛ ft., but are not through it; the part seen is capel and quartz, with stones of mundic and copper ore, but nothing to value; it appears to be a large, strong lode. We are still driving by the side of the lode in the 48 west. I intend to cut through it in the latter part of the week. In the 48 east we are now taking down the lode; it does not look so well in the present end, in consequence of the splice becoming smaller, but I think it will open again in a few feet further driving.

WHEAL CUPID.—R. Pryor, March 2: The 65 to drive east of engine-shaft, by six men, at 6l. per fm., where the lode is 3 ft. wide, composed of mundic, peach, and gossan, with spots of copper ore, and is letting out more water, which I consider to be a favourable indication of a further improvement. The 54 to drive east, by six men, at 4l. 10s. per fm., and 2s. 6d. in 1l. tribute; the lode in this end is 4 ft. wide, but not quite so good as last reported, owing to a cross-head which has for the time lessened its value. The 40 to drive east, by six men, at 2l. 15s. per fm.; lode 6 ft. wide, principally composed of a fine-looking gossan, with a little black ore, and judging from its present appearance, I think it will shortly improve. The 25 to drive east, by two men, at 5l. 10s. per fm., the lode is 1 ft. wide, composed of mundic, spar, and peach, with a little yellow copper ore intermixed. The landing and filling is set at 7l. per month.

WHEAL EDWARD.—M. H. East, March 2: In the 92 west the lode is about 3⅛ ft. wide, composed of capel, spar, mundic, and stones of ore; favourable for progress. No lode has been taken down in the 81 east since last report. In the 71 west we are driving by the side of the lode, and the men are making fair progress; according to the nature of the ground, and judging from the wall of the lode, it is opening wider, and I hope we shall see a further improvement when the lode is taken down. In the 61 west the lode has fluctuated during the week both in size and value, owing to a small cross-head being met with, but I do not attach much importance to these changes, and whilst the end continues to present indications as at present, there is not in my opinion anything to fear of a continuance of ore ground; the end is yielding at present 3 tons of ore per fm., worth 5l. per ton; the men are driving 5⅛ ft. a week on the average. In the 50 west the ground is a little easier for opening. In the stopes below the 50, both east and west of winze, the lode is worth about 2⅛ tons of ore per fathom on the average. The lode in the new rise in back of the 50 east, is producing some good work, and looks very promising. The lode in No. 2 rise, in back of the 50 east, is looking very well; the men are getting good wages at 6s. 8d. in 1l. In the 40 east, 6 fms. behind No. 2 rise, the lode is improved, worth at present 2⅛ tons of good ore per fathom, and very promising. There is no other alteration of importance. On the whole, the mine is much improved, and is looking very promising. I consider our present raisings are not much below the working cost, which is the best proof of our success.

— M. H. East, March 6: The lode in the 40 east is at present a good course of ore worth 35l. per fm. The 61 west looks very promising; the lode continues large and orey.

WHEAL GRENVILLE.—G. R. Odgers, March 2: There has been no lode taken down in the engine-shaft this week. In the 100 east we have secured the run, and in the end there is a good branch of ore, of the value of which I hope to be able to give you more particulars in my next. The lode in the 100 west is 1 ft. wide, of quartz, and a little ore, tribute ground. The lode in the 90 east is 2 ft. wide, of quartz, and stones of grey ore, saving work, and a very kindly lode. A stope below this level is worth full 20l. per fathom. The lode in the 90 west is full 1 ft. wide, and yielding 1 ton of ore to the fm. A stope in the back of this level is worth from 10l. to 15l. per fm. All the other bargains are looking much the same as I stated in my advice for Saturday.

WHEAL HARRIETT.—S. Williams, March 2: The engine-shaft is progressing satisfactorily. The lode in the 100 east end is divided by a horse of granite; the north and south parts of the lode are worth 50l. per fm.; the stope in back of this level, 5 fms. behind the end, is worth 50l. per fm. The stope, east from winze, above the 100, is worth 30l. per fm. The stopes below the 90 are worth 10l. per fm. The 90 end is producing good stones of ore. The lode in the stopes below the 74, is worth 10l. per fm. The lode in the 30 end, east from Bates's shaft, is producing stones of ore. The lode in the 10, east end, is unproductive. The lode in the deep adit end is still disordered by the cross-course, and the stope above the deep adit is worth 7l. per fathom.

WHEAL HENRY.—E. Ralph, March 2: The engine is working very well, but the forking is rather slow in consequence of the rain; should the weather prove a little favourable, we shall soon drain to the bottom.

WHEAL KITTY (Lelant).—W. Williams, March 7: Gowan Lode: The lode in Wickett's shaft, sinking below the 30, is worth 6l. per fm. The lode in the 30 end, west of Wickett's shaft, is worth, 3l. per fm. The lode in the 30 end, east of Wickett's shaft, is worth 14l. per fathom. The lode in the winze sinking below the 20, west of Wickett's shaft, is worth 5l. per fm. The lode in Philip's shaft, sinking below the 30, is worth 3l. per fm. The lode in the 30 end, east of Philip's shaft, is worth 3l. per fathom. The lode in the 30 end, west of Philip's shaft, is not of much value.—North Russoe Lode: The ground in Bolitho's shaft is not quite so favourable for sinking as it has been.—Wheal Kitty and Wheal Mary United: The lode in the 160 end is worth 5l., per fm. The lode in the 150 end is worth 6l. per fm. The lode in the 130 end is worth 4l. per fm. The lode in the 110 end is worth 4l. per fm. The tribute pitches throughout the mine are producing about the same quantity of tin as for some time past.

WHEAL MARY ANN.—P. Clymo, H. Hodge, J. Harris, J. Stevens, March 7: The lode in the 170, north of Pollard's shaft, is 3 feet wide, and worth 7l. per fm.; in the same level south it is 2⅛ feet wide, and worth 6l. per fm. In the 160 north it is 2 feet wide, and worth 5l. per fm.; in the same level south it is 3 feet wide, and worth 6l. per fm. In the 150 north it is 2⅛ feet wide, and worth 4l. per fm.; in the same level, south of Clymo's shaft, it is 3 ft. wide, and worth 9l. per fm. There is nothing new in the 110 south of the slide. Clymo's shaft is sunk 7⅛ fms. under the 150. The stopes and pitches are producing much as usual.

WHEAL NORRIS.—J. Nance, J. Andrews, March 2: The engine and flat-rod shaft are progressing in the sinking very satisfactorily. The lode in the bottom of east shaft is 18 in. wide, and rather more compact that it was when last reported, but the water is still very quick. The No. 3 lode in the adit end, driving east, is not so large as when last reported. In the present end it is 12 in. wide, composed of peach, and about the same quality as before.

WHEAL PROSPIDNICK.—R. Kendall, March 4: We have cut into the lode under the slide 1 ft., and find good work for tin. I cannot say much about it, as we have not opened much ground. At Watson's we have taken down some of the lode, and find it 1 ft. wide—saving work. Our stamps are working well; after a day or two we shall put in some tinstuff.

WHEAL SICILY.—J. Symons, March 5: We have had the sink cleared up where the streamers discovered the lode, which is drained quite dry by our operations. I have broken some fine stones of lead from it to-day, and looking at the lode in this sink its underlie is very little indeed, and if it continues the same course we cannot expect to reach the lode for 3 or 4 fathoms driving. The cross-cut is driven towards the lode about 6 fathoms; no lode yet cut. The ground is of much the same character as reported last week—a beautiful light-blue killas, and letting out a deal of water. The machinery is working well.

WHEAL SIDNEY.—W. Edwards, March 7: The 60 cross-cut is now extended from new engine-shaft toward the south lodes 10 fms. 4 ft.; ground just as last reported.—Old Engine-shaft: Since last report we have been obliged to put in a drop-clack in the plunger column; and also having had some heavy rains, we have not made the progress in forking we could desire; but taking all into account, we are getting on better then we could even expect; the water is now down 23 fms. from surface. Machinery and pit-work all going on well.

WHEAL UNION.—T. Glanville, March 6: The mine throughout is looking much the same as reported on last week.

WHEAL UNITY CONSOLS.—W. H. Reynolds, March 2: In the 75 west the lode is 2 ft. wide, with spots of rich grey ore in it, and we think there will soon be a good lode in this end. Other parts are just as last reported.

WHEAL WREY CONSOLS.—P. Clymo, W. Hancock, M. Whitford, March 7: The engine-shaft is sunk 4 fms. 1 ft. under the 106. There is no change in the 106, either north or south, since last reported on. In the 96 north the lode is 2½ feet wide, producing 8 cwts. of lead per fathom; in the same level south it is 3 feet wide, producing 6 cwts. of lead per fm. In the 84 north it is 1½ ft. wide, producing 5 cwts. of lead per fm.; in the same level south it is 3 ft. wide, producing 8 cwts. of lead per fm. In the 74 north it is 1½ feet wide, producing 4 cwts. of lead per fm. The stopes and pitches are improved.

WILLOW BANK.—J. Boundy, March 5: The lode in the 17, west of western shaft, is at present 5 feet wide, and presents a more promising appearance, containing copper, sulphur, and spar, with occasionally spots of lead ore, but not enough of the latter to value. The ground in the cross-cut driving north from the 17 is much the same for exploring, and the men are making good progress. The machinery is in good order, and working well.

WORVAS DOWNS.—R. Harry, March 5: We are progressing with the work throughout the mine as speedily as possible. At the engine-shaft the men are working with good spirit, and no time shall be lost in reaching the deep adit level, at which point we purpose fixing a plunger-lift. The western shaft is cleared to the shallow adit, platsollar put in, and the adit cleared east towards No. 2 shaft about 8 fms., through a firm level, which requires no timber.—Wheal Fiat Lode: Dunn's shaft is securely timbered from surface to adit, and so soon as the winding apparatus, now in course of erection, is completed operations on this lode will be resumed with vigour. There are other lodes still further south, where our chances of making valuable discoveries are considered good, and which shall receive out immediate attention as soon as the dry weather sets in. We are getting about a parcel of tin for the market as fast as possible.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

The ASHBURTON UNITED MINES have sold a parcel of tin of 20¼ tons, realising 1526*l.* 15s. 10d.

NANTEOS AND PENRHIW.—We stated lately that the new wheel was finished; it is now set to work, and the sinking is resumed below the deep adit, where the lode has been proved to be worth at least 2 tons of lead per fathom, so that very important discoveries may shortly be looked for. The level west of No. 2 rise is worth 6*l.* per fathom, and has averaged that during the past month. Rowe's level, west of No. 1 rise, is worth 5*l.* per fathom; and the same level west also 5*l.*, and they have averaged that value during the past month. There are three stopes—one worth 10*l.* and two worth 6*l.* per fathom each. There are 30 men on tribute, at 6*l.* 15s. to 7*l.* per ton. Altogether the prospects are very good, and the returns are likely to be much increased.

At PENHALE MOOR the 20 fm. level has intersected the caunter lode, which is 18 in. wide, good work for tin, and of the same character as the level above. In a few weeks the new lode will be seen in the 20 cross-cut, when no doubt is entertained that with additional stamping-power the mine will ere long return profits.

SOUTH WHEAL KITTY (Lelant).—I am glad by the receipt of intelligence from Capt. Michell, the manager of this mine, to learn that an important discovery has been made there. In sinking a shaft from surface, and only a few fathoms down, the lode is worth 18*l.* per fathom, and improving as it deepens. I congratulate Mr. Webb, the purser, who has a large interest in the mine, on this occasion, as it may somewhat alleviate his feelings, which have been so shamefully outraged by the unfair and unkind proceedings of the committee at North Treskerby.

ROSEWARNE CONSOLS.—The discovery here continues very rich, and the ore at surface proves the value of it. This is a fine thing for the adventurers, and is the prize of the present time. The ore is a rich mixture of black and grey, and makes a large produce, so that it will fetch a high price; and as the ground is very easy the profits will be great.

RIDDEN.—The agent reports that the works are progressing satisfactorily, and that they are engaged in sinking the shaft as fast as they can.

TREVOOLE.—The late discovery is one of very great importance, the lode being 3 ft. and the leader part 1 ft. wide, worth 30 per cent. for copper; this lode is standing whole to surface. The improvement is in and near to the elvan course, a point which cannot be overrated, since the elvan will caunt all the lodes in the mine for over 50 fathoms in length. At each intersection a cross-cut is being driven at the 80, which is expected to intersect the lode about 70 fathoms before the present end shortly, as the water is bursting out, and is highly mineralised.

GREAT WHEAL ALFRED.—It must be gratifying to the shareholders to read the splendid report from the agents, and to see their property improving in value, as it has done since Jan. 12, it then being worth 237*l.* (averaging stopes and ends), and March 2, 414*l.* A splendid sampling of 341 tons, being an excess of 178 tons over the January sale, fully substantiating the agents' reports at the last meeting of being able to pay cost.

At WEST SOUTH CARADON the operations are progressing favourably, and, being a continuation of the celebrated South Caradon and West Caradon lodes, are likely to be equally as productive and profitable to the shareholders. The Caradon district stands apart from all others for its productive character of rich copper ore. The result from the operations of the two mines referred to, upon a capital of 5760*l.*, have amounted to 248,364*l.* sterling profit; their present market value being 225,760*l.*, making a total of 474,124*l.* West South Caradon bids fair to be equally productive, which under the management of Capt. Pryor cannot well fail to prove a prize.

WHEAL POLMEAR.—The Quarry lode is much improved since the last meeting; it is now 5 ft. wide, 3 ft. of which is almost solid yellow copper ore; the other 2 ft. is excellent work for copper. Altogether, this is a splendid lode.

CUDDRA.—The engine-shaft, which was supposed to be full of rubbish from the 66 to the 96, is found to be clear from about the 70, and the water has been drained 14 fms. during the week. As soon as supports have been fixed for the pumps the latter will be dropped to the bottom, shortly after which the water will be drained. This incident will save three months in time and a considerable sum of money. The copper ore department will in consequence soon be proved, and it is expected that considerable quantities of ore will be raised when the 76, 86, and 96 fm. levels are cleared. The stamps-house is finished, and the engineers are engaged in putting in the engine. The tin lode is found to continue from 7 to 8 feet wide in the 10, 20, 30, 40, and 56 fm. levels, in which it is being laid open for stoping, and will soon be in a condition to produce large quantities of tinstuff for the stamps. All other operations are being continued with vigour.

GREAT CRINNIS.—The lode in the shaft continues to improve, it being larger than the shaft is wide; and the agents are expecting improvement to be progressive, from the nature and composition of the lode. When the antecedents of this large lode are borne in mind, this change in its nature is watched with considerable interest by all persons connected therewith.

WHEAL HENDRA.—They have a good lode in the engine-shaft, which looks very well. Some good stones of tin are raising, and they hope ere long to have a large pile for sale. The engine works admirably.

LOCHWINNOCH CONSOLS MINING COMPANY (Scotland).—At these mines the discovery announced in last week's Notabilia still holds good, two men having raised from Monday to Saturday evening 15 tons of copper ore. In continuing the adit to unwater the old workings, the men on Saturday afternoon cut a new lode, containing grey, black, and spots of yellow ore. A lode had been hourly expected from the appearances presenting themselves. The miners only penetrated from 1 ft. to 14 in., but the ore blown out by the blast amounts to nearly half a ton of saving work. As it will take a day or two to clear away the rubbish accumulated and to preserve the lode, a fuller account must be delayed until next week. The agents think this is still not the working lode the former explorers had, as this lode also is nearly perpendicular, and not a flat vein, as that was said to have been. Upwards of 20 tons of copper are now ready for dressing, preparatory measures for which process are being executed as fast as the weather will permit. On Thursday last the Chairman, secretary, and several of the directors, as well as a party of the shareholders—forming, indeed, a large proportion of the proprietary—visited the mine from Glasgow, where all reside. They expressed themselves highly pleased and gratified at what they saw, particularly in the discovery, where the men were raising blocks of 40 to 60 lbs. of solid copper ore; some specimens from 4 to 5 cwts. each. A large number of beautiful examples of grey, black, and malachite ores were selected and carried back to the City of the North, for the delectation of those shareholders who could not make it convenient to visit the mine. An adjournment to Walker's Hotel took place, where a comfortable dinner was served, at the desire and expense of the gentlemen who had not previously seen their property, to which the agents, &c., were invited. The usual toasts were proposed; and the party returned to Glasgow by the 6 P.M. train, highly pleased with their day's excursion. This is a good augury for Glasgow.

CUMBERLAND BLACK LEAD.—This property is highly reported on by Mr. Tregoning, who has at the request of several shareholders examined the works. Five different points of operation are suggested to be carried out simultaneously, which are likely to be attended with great success, full particulars of which will be forwarded to the shareholders. The scarce and valuable mineral plumbago being the product of this particular mine is esteemed, and known as the purest ever discovered—hence the former proprietors were accustomed to open the mine for a few weeks only in the year, and during the last working realised above 238,000*l.* profit. The present company's operations being continuous, an increased amount of profit may fairly be anticipated. The workings on the silver-lead lode will be resumed, samples of which are being assayed by Mr. Tregoning, and every information will be included in his general report.

MEXICAN AND SOUTH AMERICAN COMPANY.—The call of 11*l.* 5s. per share, announced last week as having been made by the Master of the Rolls, referred only to those contributaries upon whom no call has hitherto been made.

LLANFYRNACH SILVER-LEAD MINING COMPANY (Limited).—The petition of Mr. Thomas Turner, of Wolverhampton, for winding-up this company came before the Court of Bankruptcy on Thursday, but, in consequence of the absence of some of the parties concerned, was adjourned.

MIZEN HEAD MINING COMPANY—SPECULATION FOR LAWYERS.—The Master in Chancery charged with winding-up the Mizen Head Copper Mining Company has authorised the sale, in Dublin, of the calls remaining due to the official manager, by public auction.

Now ready, price 6s., or 7s 8d postage stamps, Mr. THOMAS TAPPING on the COLLIERY AND ORE-MINE INSPECTION AND TRUCK ACTS. The work can be had from the *Mining Journal* office, 26, Fleet-street.

MINING AND SMELTING GLOSSARY.—Now ready, price 2s., a NEW EDITION, enlarged, of THE ENGLISH AND FOREIGN MINING GLOSSARY; to which is added the SMELTING TERMS used in France, Spain, and Germany. Published at the *Mining Journal* office, 26, Fleet-street, and may be obtained through all booksellers and newsmen.

ANNUAL REVIEW OF MINING.—Now ready, price 1s., the "Progress of Mining in 1860," by J. Y. Watson, F.G.S., being the 17th Annual Review. To be had at the *Mining Journal* office, 26, Fleet-street; or of Messrs. Watson and Cuell, St. Michael's-alley, Cornhill.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, March 8, 1861.

COPPER.	£	s.	d.	
Best selected....p. ton	105	10	0	(Nom.)
Tough cake..... „	102	10	0	—
Tile ..... „	102	10	0	—
Burra Burra .... „	103	0	0	—
Copiapo ..... „	95	0	0	—
Copper wire .....p. lb.	0	1	1	-0 1 1¼
ditto tubes ..... „	0	1	1½	—
Sheathing & bolts .. „	0	0	1½	—
Bottoms ..... „	0	1	0	-0 1 0½
Old (Exchange) .... „	0	0	10	- —

IRON.	Per Ton.			
Bars, Welsh, in London..	6	10	0	—
Ditto, to arrive	6	0	0	—
Nail rods	7	0	0	—
„ Stafford. in London	7	7	6	- 7 15 0
Bars ditto	7	10	0	- 8 0 0
Hoops ditto	8	10	0	- 8 15 0
Sheets, single	9	0	0	- 9 15 0
Pig, No. 1, in Wales ..	3	0	0	- 4 0 0
Refined metal, ditto....	4	0	0	- 5 0 0
Bars, common, ditto....	5	7	6	- 5 10 0
Ditto, merchant, in Tees	6	15	0	- 7 0 0
Ditto, railway, in Wales	5	5	0	—
Ditto, Swed. in London.	11	10	0	-12 0 0
To arrive		—		- —
Pig, No. 1, in Clyde....	2	8	0	- 2 10 0
Ditto, f. o. b. in Tees ..	2	17	0	—
Ditto, forge, f.o.b. in Tees	2	8	6	- 2 10 0
Staffordshire Forge Pig.	3	10	0	- 3 12 6
Welsh Forge Pig		—		- —

LEAD.				
English Pig	21	0	0	-22 10 0
Ditto sheet	22	0	0	-22 5 0
Ditto red lead	23	0	0	-24 0 0
Ditto white	30	0	0	-31 0 0
Ditto patent shot	24	10	0	-24 15 0
Spanish	20	5	0	-20 10 0

BRASS.	Per. lb.
Sheets	9½d.-10½d.
Wire	9¾d.-10d.
Tubes	11d.-11½d.

FOREIGN STEEL.	Per Ton.			
Swedish, in kegs (rolled)	16	10	0	—
„ (hammered).	17	10	0	-18 0 0
Ditto, in faggots	18	10	0	-19 0 0
English, Spring	18	0	0	-23 0 0
Bessemer's, Engineers Tool	44	0	0	—
„ Spindle	30	0	0	—
QUICKSILVER	7	0	0	p. bottle

SPELTER.	Per Ton.			
Foreign	18	5	0	-18 10 0
To arrive	18	15	0	- —

ZINC.				
In sheets	24	0	0	—

TIN.				
English, blocks 124	0	0	—	
Ditto, Bars (in barrels)..125	0	0	—	
Ditto, Refined 126	0	0	—	
Banca 124	0	0	—	
Straits 118	0	0	—	

TIN-PLATES.*				
IC Charcoal, 1st qua. p. bx.	1	8	6	- 1 10 0
IX Ditto 1st quality „	1	14	6	- 1 16 0
IC Ditto 2d quality „	1	6	6	- 1 8 0
IX Ditto 2d quality „	1	12	6	- 1 14 0
IC Coke ..... „	1	3	0	- 1 4 0
IX Ditto..... „	1	9	0	- 1 10 0
Canada plates ....p. ton	13	0	0	-13 10 0

In London; 20s. less at the works.

Yellow Metal Sheathing... p. lb. 9½d.

Indian Charcoal Pigs in London ..... } 6 12 6 - 6 15 0

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The metal market seems to have entirely forfeited the confidence of speculators, for even at the low prices which the exigencies of needy sellers now pretty frequently produce, it is difficult to induce buyers to operate, so heavy and sluggish is the general feeling. There is not the slightest improvement manifested in any metal since our last week's report—on the contrary, the depression is becoming greater, and as trade gets duller money gets tighter. The best and, in fact, about the only thing left to do now is to wait quietly for the old adage to be verified—that "When things are at their worst they must begin to mend," and certainly the worst cannot be far off.

COPPER.—There appears to be very little stability in the market for English descriptions, manufactured can be bought freely under price, but the long-expected decline in fixed rates has not yet been announced. The standard of ore shows but little alteration of late, and that of a downward nature. Foreign is somewhat easier in price, the demand having rather fallen off this last week. Burra Burra is now to be bought at 102*l.*; Kapunda, 100*l.*; Chilli, 88*l.*; Copiapo, 94*l.* to 95*l.*; Spanish, 90*l.* to 93*l.*; Baltimore, 98*l.*, nominal.

IRON.—Rails can now be bought at 5*l.* to 5*l.* 5s., f.o.b. in Wales. Orders very scarce, and makers will profit little in the present state of the market by manufacturing merchant bars in place of rails, as the demand is equally limited, and prices unremunerative. Staffordshire inactive, prices on the decline, especially for all makes not of first quality and well-known brand. Swedish bars in some demand, at 11*l.* 10s. to 11*l.* 15s.; a few sellers at these prices. Scotch pigs, mixed numbers, at present quoted 47s. 6d., showing a decline of 9d. per ton since this day week. Fair business doing.

LEAD.—A fair enquiry for English pig, mostly for shipment to the Chinese ports. Prices unaltered. Sheets and shot dull. Spanish pig will sell at 20*l.* 5s.

SPELTER.—The market is still weak, on account of the frequency of forced sales; the regular importers, however, are not in the market at the present prices, and the general opinion is that this metal will rapidly recover itself when once the tide turns in its favour. Stocks in London have decreased upwards of 600 tons this last month; the present stock is under 4087 tons, against 3742 tons in the corresponding period of last year, when the price was 21*l.* 5s.; present price 18*l.* to 18*l.* 10s., being 3*l.* per ton less, which is so much below the average for the last seven years.

TIN.—The smelters of English announced on the 4th inst. a reduction of 4*l.* per ton; even this has not had the effect of making buyers operate freely, prices are now as follows:—Blocks and ingots, 124*l.*; bars, 125*l.*; refined, 126*l.* The fall in English has, of course, caused a similar decline in foreign, and business is reported to have been done since the fall at 124*l.* for Banca, and 118*l.* fine Straits.

STEEL.—Foreign kegs and faggots, ordinary brand, without demand. There is some slight enquiry for ÆB, of which at present there is none in the market; the price of this favourite brand is comparatively high. English slow of sale at quotations.

TIN-PLATES.—The tin-plate trade is in such a state of prostration that it is considered not improbable that makers will agree entirely to close their works for the present until prices should rally, for at current rates they complain that every plate manufactured brings a loss to them.

THE TIN TRADE.—Mr. N. Breebaart (Goll and Co., Amsterdam), under date Feb. 28, writes:—The month which has just closed has not offered any features of interest. At the beginning some transactions which took place at 75½ fls. indicated rather a firmer market, but did not produce any permanent amelioration, for as soon as there were buyers at 76 fls. there were also plenty of holders ready to profit by the occasion to realise their stocks. No transaction of any importance has taken place during the last fortnight, the price of 76 fls. to 76½ fls. submitted to for small lots of 50 and 100 slabs not being obtainable for original warrants of 500 slabs. For the last few days there are only buyers at 75½ fls.

	1861.	1860.	1859.
Stock of Banca tin on warrants, Jan. 31 .....Slabs	61,091	51,368	44,261
Deliveries in February	10,137	6,725	8,945
Stock on warrants Feb. 28.....	50,954	44,643	35,316
Stock in hands of Trading Society for annual sale.....120,746	....	89,369	95,315

The deliveries of last month exceed those of the preceding years; but as, on the contrary, the arrivals for the next sale have increased to a larger extent, the total excess amounts to-day to 37,688 slabs, in conformity to the above particulars. The total deliveries since the public sales amount to 118,084 slabs; against 107,735 slabs for the corresponding period of 1859-60, and 178,101 slabs for the corresponding period of 1858-59.

Messrs. Von Dadelszen and North (under date March 5) write that the state of the tin market during the past month has afforded but little subject for special remark, the prevailing feature has been great dulness, bnt at the same time tin has kept its position better than other metals. The reduction which we noticed in our last Circular caused many orders for Straits from abroad to come into our market to meet wants which would otherwise have been supplied by Banca from Holland; and the export demand for Straits was sufficient to clear off all that was offering during the earlier portion of the month, enabling holders to command 123*l.* During the last 10 days, however, an entire change has come over our market, the export demand has been satisfied, the home consumption is steadily diminishing, and the supply of tin in the market is increasing, the immediate effect of which resulted in a decline to 122*l.*, with the most limited demand. This morning a decline of 4*l.* per ton has been announced in English tin, and Straits tin has been sold at 120*l.* The future price of tin depends entirely on how far holders can be induced to wait for a legitimate demand, and not force a speculative one. The position of the tin-plate trade, and the general statistics of the article, certainly do not induce one to anticipate anything but a further decline, and that very probably a serious one. The quantity of Straits both here and on the way is considerable, and the Americans will certainly not, at present, compete with us so strenuously in the East for supplies as they have done during the past year; beside this, we can hardly believe the Dutch houses will continue to hold as firmly in the face of the very large arrivals for the sale; at the same time, as soon as business revives, and speculative buyers operate to any extent, the rebound must be sudden and considerable. The delivery during Feb., both here and in Holland, exceeds the most sanguine expectations. The question is, will it continue? Or, has it been caused by the sudden fall in Straits, and old purchases of Banca being removed for consumption? The advices from the Straits give a full supply, but a scarcity of shiproom. From America we hear of a large stock; in the ports of Boston and New York the quantity stored is about 37,250 slabs (1200 tons), and an unexpected arrival in New York of about 1500 slabs Banca, direct from China, has caused great surprise, it being feared that it may be followed by larger quantities, independent of about 500 tons Straits that are now afloat from Penang and Singapore. We hear already of 600 slabs Straits having been shipped from New York to this port; under these circumstances, it is not probable that the demand for tin in America will quickly revive, but that the American requirements at the next Dutch sale will be small. With reference to the price in America, the reduction from the highest point to the present is about 6 cents per lb., which is equivalent to about 25*l.* per ton, whereas we have only come down about 10*l.* per ton.

The Americans are the best customers we have for tin, and the unhappy differences which have arisen in that country have tended to reduce the demand to such an extent that black tin has again fallen in price; and the profits of the tin mines must be further affected until a reaction takes place. It is fortunate, so far, that copper and lead have kept pretty steady, to counterbalance in some degree the depression in the tin mines. Since our last the MINING SHARE MARKET has been moderately active, and a large business done in East Caradon, Marke Valley, West Caradon, New Treleigh, South Frances, North Basset, Basset, East Basset, Wheal Mary Ann, Treloweth, Trelawny, Wheal Unity, East Budnick, Crebor, East Carn Brea, Wheal Edward, East Russell, Holmbush, Wheal Grenville, East Grenville, and a few other mines. South Wheal Frances, 180 to 185, ex div. of 1*l.* 10s. per share declared on Monday; at the meeting the accounts showed a profit on two months of 340*l.* 2s. 7d., and a balance in hand of 104*l.* 8s. 10d., after payment of the dividend. Nothing is said in the report about the law suit. The state of the mine has greatly improved, with several very productive ends in the new north lode, which is also expected to be cut at the 154 before the next meeting; at the 44 it has just been cut, worth 40*l.* per fm.; from this report the returns ought considerably to increase, and large dividends be paid in future. Alfred Consols, 2¾ to 3¼; Botallack, 205 to 210; Bryn Gwiog, 31 to 33; Bryntail, 4 to 4¼; Cargoll, 17 to 18; Carn Brea, 92½ to 95; Devon Great Consols, 350 to 360; East Alfred, 15s.; East Basset, 95 to 100; East Carn Brea, 8 to 8¼. Wheal Margaret, 46 to 48; in the report presented to the meeting by the agents, they state that "the severity of the weather, combined with other causes over which we have no power, have tended materially to give a complexion to the accounts very different from that contemplated at the last meeting." East Rosewarne, 31s. to 33s.; Grambler and St. Aubyn, 21 to 23; Great Retallack, 35s. to 37s. 6d.; Great South Tolgus, 7 to 7½; Herodsfoot, 34 to 36. East Caradon shares have again been largely dealt in, and leave off 15¼ to 16; at the meeting yesterday the dividend would be 5s. per share; the ore ground now gone over in the 50 is 95 fms. long, and the eastern end is still worth 20*l.* per fm.; the western end is suspended; this lode will be cut at the 60 in about six weeks, the ground in the cross-cut having become very favourable. Marke Valley shares also dealt in, and leave off 6¼ to 6⅜; the mine is looking well generally, and after driving some distance further by the side of the lode at the 100 east, a cross-cut will be put through the lode. This point, which is of great interest, will come off in about a month. West Rose Down, 5¼ to 6, and business done; the works are going on favourably in driving the adit to cut the Rose Down and Marke's lode of Marke Valley. Hingston Down, 1¾ to 2¼. Lady Bertha, 21s. to 23s. Great Alfred shares have been in good demand, and leave off 19s. to 21s.; from the reports of the mine, it has not looked so well for many months, and it is difficult to account for the low price of shares. Lewis Mines, 5s. to 10s.; New Seton, 48 to 50; North Basset, 7¼ to 7⅞; and a large business done. North Busy, 5 to 5½; North Downs, 3⅞ to 4, and in demand, and the mine improved. North Frances, 4 to 4¼.

Michell, 8s. to 10s.; at the meeting a call of 1s. per share was made, and the report of a very satisfactory character. The lode, which has been opened upon for 200 yards in length, is of the most promising character for early productiveness, and a shaft will immediately be sunk upon it. The sett has generally been considered one of the finest in Flintshire, having the celebrated Milwr and Soway lodes passing through it; and the present discovery is supposed to be an entirely new vein, 4 feet wide, in a fine limestone, and yielding stones of lead within a few feet of the surface. North Robert, 18s. to 20s.; North Roskear, 20 to 22; Par Consols, 9¼ to 9¾; Pendeen, 5 to 5¼; Prosper United, 25s. to 30s.; Providence Mines, 38 to 40; Rosewall Hill and Ransom, 1¼ to 2; Rosewarne and Herland, 10s. to 12s. 6d. Bottle Hill, 25s. to 27s.; the mine has sampled 7¼ tons of black tin, and has stuff already broken calculated to yield about 16 tons more. Wheal Grenville shares are firmer, at 2¾ to 3; the lode in the shaft is increasing in size, and the 100 east is worth 1 ton per fm.; the stope, 20*l.* per fm.; the 90 west, 1 ton; and Watson's lode, in the 66 east, 1 ton of ore per fathom; thus both lodes are becoming productive. East Grenville, 12s. 6d. to 15s.; Rosewarne United, 21 to 23.

Dale, 13s. to 14s.; a great deal of uneasiness has been caused to some of the shareholders in this company by circulars issued by the directors, to the effect that certain shares, for which the holders have the regular certificates, are, to say the least, informal; and that the transfers (dated months back), and for the due registration of which in the books of the company the certificates above-named were issued, "cannot be recognised by them" (the directors). In explanation of all this, we understand, though we are not in possession of all the particulars, that great irregularities have been discovered in the books of the company; that Mr. Dunsford has been appointed the new secretary, and that the directors are daily investigating their affairs. Be this as it may, we apprehend that those shareholders who bought their shares in the open market, and hold the certificates of registration, signed by the authorised agent of the company, may rest quite satisfied that the directors and the company are liable to them, notwithstanding "the advice of counsel." Of course, we pen these remarks in ignorance of all the facts which have led the directors to take the steps they have done; and we go upon the ground that—supposing there has been an illegal issue of shares, however much it must be deplored and censured—innocent shareholders who paid for their property *on the regular office certificates* are not to be made the victims. Sortridge Consols, 11s. 6d. to 12s. 6d.; South Caradon, 300 to 310; South Condurrow, 12s. 6d. to 15s.; Tamar Consols, 2⅛ to 2¾. East Russell have been largely dealt in, and leave off 6¾ to 6⅞; the mine has been specially inspected, and, as we understand, the good report of the agents presented to the meeting confirmed. The mine is said to be looking well, with a good deal of ore discovered, and one or two points of interest to come off shortly. Tincroft, 5⅜ to 5¾; Treloweth, 3¾ to 4; Trelyon Consols, 13 to 15; Vale of Towy, 8s. to 9s.; Wendron Consols, 18 to 20; West Seton, 350 to 355; North Treskerby have declined to 29, 31; West Caradon, 79 to 81; West Stray Park, 4⅜ to 5; Wheal Basset, 107½ to 112½; Wheal Buller, 117½ to 122½; Wheal Clifford, 180 to 190. Wheal Crebor have declined to 13s., 14s.; the lode in the 48 east is not looking quite so well. New Treleigh have advanced to 2⅜, 2½, and a large business done; on Wednesday a telegram was received at the office that the Wheal Maria north lode had been intersected at the 70 cross-cut, yielding splendid stones of ore; this lode is whole to surface.

Wheal Kitty (Lelant), 12 to 13; Wheal Ludcott, 3⅜ to 3¾; Wheal Mary Ann, 18 to 20; Wheal Seton, 87½ to 92½; Wheal Trelawny, 13 to 14; Wheal Unity, 11s. to 13s.; Wheal Wrey, 10s. to 12s. 6d.; Wheal Norris, 22s. to 24s.; Tees Side, 7s. to 9s.; West Basset, 17s. to 18s.; North Crofty, 7½ to 8; Great Wheal Vor, 1½ to 1¾. West Bryn Gwiog, 32 to 33; the lode in the eastern shaft is fully 4 ft. wide, producing good lead immediately under the shale; prospects reported as good. Billins, 20 to 22; operations have been commenced, and we understand the Parys Company, within a few yards of the Billins boundary, will produce 40 tons of ore this month. Stray Park, 36 to 38; at the meeting the accounts showed a debit balance of 451*l.* 9s. 8d., but no call was made. The report states that the engine-shaft is sinking below the 192. The 192 east is worth 10*l.* per fm. for tin, driving at 15*l.* per fm. The winze under the 180, on south part, not yet seen in the 192, worth 15*l.* per fm.; average of 2 fms., 40*l.* In order to be prepared to return the increased quantities of tin expected in future, a new calciner is required, for which, and to extend the dressing-floors, the estimated cost is 1000*l.* during the next six months. Before the previous account, the agents estimated the tinstuff at surface to produce 12½ tons, at 80*l.* per ton 1000*l.*; since which nearly 10 tons have been sampled, and some tons more would have been returned, they state, but for the severity of the weather, which prevented the erection of sufficient dressing apparatus. North Minera, 38s. to 40s.; the communication at the 35 is nearly completed, having about 6 feet more to drive. In the bottom of the level the course of ore gone down is worth fully 5 tons of ore per fathom. Nearly 50 tons of ore are said to be ready for market. Worthing, 17s. to 19s.

On the Stock Exchange, a moderate amount of business has been transacted in mining shares during the week. The prices officially recorded in British mining shares were—Devon Great Consols, 352½, 360, 357½, 358; East Caradon, 15½, 15¾, 15½; East Wheal Russell, 6⅞, 6¾, 6, 6¼, 6⅛; Lady Bertha, 1; Margaret, 47, 48; North Wheal Basset, 7⅛, 8, 7⅛, 8, 7⅞, 8⅛, 7¾, 7½; Providence, 38, 39, 38, 39, 38½, 39; West Cara-

don, 81, 80, 81; Wheal Edward, 2½; East Basset, 95½; South Wheal Frances, 181, 185; Wheal Kitty, 12½; North Frances, 4; West Seton, 350, 352½, 350; Hingston Down, 2, 2½. In Colonial Mining Shares the prices were—Australian, ¼, 1; Great Northern Copper of South Australia, 1½, 1½, 1½, 1½; General, 20¾, 21; Kapunda, 2½; North Rhine Copper of South Australia, ⅜; Worthing, ⅜. In Foreign Mining Shares the prices were—St. John Del Rey, 31½, 31⅜, 31½, 30¾, 30½, 30½; Fortuna, 2½; United Mexican, 4½, 4⅜, 4, 4⅜, 4½, 4; Linares, 9¼.

Foreign and Colonial Mining Shares still continue steady "outside," and in the instance of United Mexican and Worthing a slight advance in price has taken place during the week, while St. John Del Rey have declined: these shares leave off at 30½, 30¾. The telegram from the mines to hand shows a profit for the month of December of 6093*l.*, an increase of upwards of 250*l.* on that of the previous month. Worthing shares are quoted 17s., 19s. Although not officially announced, we believe that the shares which the directors offered *pro rata* to the shareholders have not been taken up so freely as the appearances at the mine seem to warrant; and, as there is every probability of the directors taking these shares themselves, a better tone on the market is observable. This matter being off the shareholders' minds, a considerable advance may be anticipated, should the next despatches prove as encouraging as the recent ones. Kapunda, 2, 2½; North Rhine Copper quiet, at ⅜; Fortuna, 2, 2½; Great Northern, 1½, 1¼; United Mexican have been freely dealt in, and leave off at 4, 4⅛; Australian, 1⅛, 1¼; Port Phillip, 9s., 10s.; Cobre quiet, at 40, 40½; Linares, 9, 9¼; Labuan Coal, 2¼, 2⅜ prem.

At Pool Ticketing, on Thursday, 2893 tons of ore were sold, realising 19,926*l.* 1s. 6d. The particulars of the sale were—Average standard, 126*l.* 9s.; average produce, 7⅛; average price per ton, 6*l.* 18s.; quantity of fine copper, 220 tons 10 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Jan. 31	4015	£130 8	6⅜	£5 10 0	£86 17
Feb. 7	3144	128 11	6⅝	5 17 0	87 8
„ 21	4117	131 12	6½	5 15 6	89 3
„ 28	2883	129 12	6⅜	5 10 6	86 10
March 7	2893	126 9	7⅛	6 18 0	90 7

Compared with the last week's sale, the advance has been in the standard 3*l.* 4s., and in the price per ton of ore about 4s. 3d. Compared with the corresponding sale of last month, the advance has been in the standard 2*l.* 8s., and in the price per ton of ore about 3s. 2d.

At South Wheal Frances meeting, on Monday, the accounts showed—Balance last account, 2508*l.* 6s. 3d.; copper ore sold, 2974*l.* 9s. 5d.; tin sold, 143*l.* 7s. 2d.; income tax on dues, 22*l.* 18s. 1d.=5649*l.* 0s. 11d.—Mine cost, Dec. and Jan., 1910*l.* 1s. 3d.; merchants' bills, 482*l.* 15s. 5d.; dues, 207*l.* 17s. 2d.; income and land tax, 199*l.* 18s. 3d.: leaving credit balance, 2848*l.* 8s. 10d. The profit on the two months' working was 340*l.* 2s. 7d. A dividend of 74*l.* (1*l.* 10s. per share) was declared, and 2104*l.* 8s. 10d. carried to credit of next account.

At the Spearne Moor Mine meeting, on Tuesday, the accounts showed—Balance last audit, 223*l.* 6s. 11d.; tin sold, 1806*l.* 12s. 7d.; precipitate of copper sold, 21*l.*—2050*l.* 19s. 6d.—Mine cost, three months ending Dec., 1071*l.* 0s. 3d.; materials, coals, &c., 405*l.* 16s. 2d.: leaving credit balance, 574*l.* 9s. 1d. A dividend of 420*l.* (1*l.* 10s. per share) was declared, and 154*l.* 9s. 1d. carried to credit of next account. Capts. Bennetts and Ellis reported that their sales of tin for the next quarter will, probably, be not quite so much as for the last, but still their prospects are good.

At Par Consols meeting, on Tuesday, a dividend of 1600*l.* (5s. per share) was declared.

At the Trelyon Consols meeting, on Wednesday, the accounts showed—Balance last audit, 78*l.* 14s. 9d.; tin sold, 794*l.* 10s. 3d.; sundries, 55*l.* 16s. 9d.=929*l.* 1s. 9d. —Mine cost, merchants' bills, coals, and carriage, 822*l.* 15s. 7d.; Trelyon Lower Mine cost, 93*l.* 16s. 7d.: leaving credit balance, 12*l.* 9s. 7d.

At Stray Park Mine meeting, on Tuesday, the accounts showed a debit balance of 425*l.* The agent's report was considered satisfactory.

At Grambler and St. Aubyn Mines meeting, on Tuesday, the accounts showed—Balance last audit, 269*l.* 14s. 7d.; copper ores sold (deducting 92*l.* 1s. 3d. dues, at 1-18th) 1565*l.* 1s. 6d.=1834*l.* 16s. 1d.—Mine cost for four months ending January, 1155*l.* 14s. 3d.; merchants' bills, 383*l.* 18s. 2d.: leaving credit balance, 295*l.* 3s. 8d. The profit on the four months' working was 25*l.* 9s. 1d. Capts. Davey and Michell reported upon the various points of operation. The mine appears to be looking poor throughout, with prospects, however, of improving.

At South Wheal Betsy Mine meeting, on Feb. 27, the accounts showed —Balance last audit, 3*l.* 12s. 11d.—Mine cost, merchants' bills, and sundries, 289*l.* 9s. 9d. —293*l.* 2s. 8d.—Calls received, 288*l.* 13s. 6d.: leaving debit balance, 4*l.* 9s. 2d. A call of 1s. per share was made. Captain W. Stephens reported that they were in a highly mineralised country, and he entertains strong hopes when the lodes are intersected they will be found productive.

At Calvadnack Mine meeting, on Tuesday, the accounts showed a loss of 1100*l.* A call of 25s. per share was made. The mine is looking poor.

At Great Brigan Mine meeting, on March 2 (Mr. G. Scammell in the chair), the accounts showed a debit balance of 2611*l.* 14s. 9d. A call of 10s. per share was made. Capts. Trelease and Crase reported that they were of opinion that when the mine is in fork, the levels cleared and extended on the course of the different lodes, it will prove productive.

At East Alfred Consols meeting, on Feb. 25, the accounts showed—Balance last audit, 579*l.* 15s. 5d.: labour cost, Nov., Dec., and Jan., 784*l.* 18s. 1d.; merchants' bills to end of Jan., 365*l.* 4s. 5d.; sundries, 36*l.* 18s. 4d.=1766*l.* 16s. 3d.—By call, 563*l.* 4s.; copper ore, 678*l.* 9s. 2d.; mundic, 26*l.* 1s. 7d.; blende, 9*l.* (less lord's dues, 39*l.* 12s. 9d.): leaving to debit, 529*l.* 14s. 3d. A call of 2s. 7d. per share was made. Captains J. Vivian and H. Skewes reported on the mine. Since the last meeting "our progress in the bottom of the mine has been very much retarded, owing partly to a great increase of water, and partly to the breaking in of the adits, by which the workings have been flooded; however, we are now got pretty right again, and have cut a plat at the 70, and driven 4 fms. south. The stopes throughout the mine are without alteration to notice."

At North Wheal Busy meeting, on Feb. 28, the accounts showed—Balance last audit, 464*l.* 3s. 2d.; labour cost, Oct., Nov. and Dec., 975*l.* 12s. 1d.; merchants' bills to end of Dec., 375*l.* 0s. 2d.; lord's dues, 51*l.* 16s. 8d.; sundries, 26*l.* 17s. 1d. —1893*l.* 9s. 2d.—By call, 460*l.* 16s.; tinstuff, 843*l.* 0s. 6d.; copper (on account) 90*l.*; deductions from merchants' bills, 9s. 3d.: leaving to debit, 499*l.* 3s. 5d. A call of 10s. per share was made. Capt. Craze reported on the mine: they have five tribute pitches on the tin lode, working by twelve men, at tributes varying from 9s. to 13s. 4d. in 1*l.*; and one, the south copper lode, working by three men, at 12s. in 1*l.*

At Gurlyn Mine meeting, on February 28, the accounts for three months ending December showed a debit balance of 1301*l.* 12s. 5d. A call of 5s. per share was made. The appointment of Capt. John Rees as underground agent and assayer, at seven guineas per month, was confirmed. Messrs. Fred. Hill, J. C. Roberts, J. Pool, W. Harvey, W. Hosken, with the purser, were appointed the committee of management during the ensuing twelve months, to meet on the mine the first Saturday in every month. The purser was authorised to consult with Messrs. Grylls, Hill, and Hill, and adopt such measures as they may advise for the enforcement of payment of arrears of calls.

At West Sharp Tor Mine meeting, on Wednesday (Mr. W. A. Thomas in the chair), the accounts showed—Balance last audit, 198*l.* 16s. 4d.; calls received, 668*l.*—866*l.* 16s. 4d.—Mine cost, merchants' bills, and sundries, 758*l.* 14s. 1d.: leaving credit balance, 108*l.* 2s. 3d. A call of 3*l.* per share was made. Captain W. Richards reported upon the position and prospects of the mine.

At the Goonzion Mine meeting, on Feb. 27, the accounts showed—Balance last audit, 33*l.* 5s. 9d.; mine cost, four months ending January, 153*l.* 12s. 2d.=186*l.* 17s. 11d.—Calls received, 150*l.*; Captain J. Vivian, 1*l.* 5s.: leaving debit balance, 35*l.* 12s. 11d. A call of 1s. per share was made. Capt. Charles Carkeek was appointed manager, at a salary of 4*l.* 4s. per month, in the room of Capt. Barnes, resigned. Mr. Andrew Hingston was appointed surgeon. Capt. John Prince has carefully inspected the mine, and made a lengthened report upon its position and prospects.

At the Great Wheal Vor United Mines (special) meeting, on Tuesday (Mr. G. Noakes in the chair), the denomination of shares was reduced from 23,623 to 5908, and it was agreed that the Carleen sett should be given up, thereby circumscribing the company's operations to Wheal Metal, which is looking exceedingly promising. It is stated that at the forthcoming general meeting the accounts will show an amount of actual profit sufficient to admit of a dividend being declared. Details elsewhere.

At Trencrom Mine meeting, on March 1, the accounts showed a debit balance of 909*l.* 19s. 4d. A call of 1*l.* per share was made. The resignation of Capt. Thomas Richards, as manager, was accepted. Messrs. W. Richards, R. Rosewarne, J. Hollow, and T. P. Michell were appointed a committee for the agents to confer with on all matters relating to the management of the mine. They have thirty-eight men on tutwork, and twenty-five men on tribute; and Capts. R. Hollow and F. Bennetts report that "on the whole, our future prospects are fair, and we hope our returns will increase, as we are opening tribute ground."

At East Devon Great Consols Mine meeting, on Feb. 27, the accounts for Nov., Dec., and Jan. showed a debit balance of 155*l.* 17s. 1d. A call of 3s. per share was made. The engine-shaft has been sunk to the 40 fm. level, and everything completed therein. The ground is favourable for copper ore, and Capt. Neill is sanguine of a good discovery, and the realisation of all their expectations.

At the Michell Mining Company meeting, on Wednesday, the accounts showed a credit balance of 184*l.* 14s. 5d. A call of 1s. per share was made. Capt. W. Sandoe reported on the mine. "The sett is of considerable extent, and embraces several east and west, and north and south lodes, some of which have been partially wrought on, while others remain unexplored. * * * I recommend at once the sinking of a new shaft down on the course of the lode, where every fathom we sink would throw still greater light on the prospects, and also enable us to see what would be required, as the machinery, &c., for its still further development."

At the Devon Kapunda Mine meeting, on Wednesday (Mr. R. Moss in the chair), the resolution passed at the previous meeting for winding-up the company was confirmed. Details in another column.

At the Garreg Mine meeting, yesterday, the accounts presented showed a balance of liabilities over assets of 190*l.* 0s. 10d., and a call of 4s. per share was made. The agent reported that in the lode in the 20 west a favourable change had taken place; it is now presenting a more kindly appearance than for some time past, and is producing some good stones of lead ore, calamine, &c., and he doubts not that it will open out well in going west in the new ground.

At the Merllyn Mine meeting, yesterday, the accounts showed a balance of liabilities over assets of 114*l.* 3s. 10d., and a call of 1s. per share was made. The agent reported that the cross-cut east of Sandoe's shaft had slightly changed for the better, and thinks that a greater change may soon be expected, as the Orsedd lode, from which they are making good returns, comes, according to its run, through the Merllyn Company's ground, no more than 4 to 6 fathoms east of the present workings; therefore, in his opinion, this is a point of great interest.—New Shaft: The lode has been considerably disordered by a cross-course, and has not since resumed its former productive and promising appearance; but, judging from the kindly character of the ground, and the fine stones of lead ore they have occasionally in driving, he has no doubt but that the lode will soon become as settled and as productive as formerly.

At the Drake Walls Mine meeting, on Tuesday (Mr. W. Betteley in the chair), the accounts showed a balance of assets over liabilities of 360*l.* 2s. 4d. Details will be found in another column.

At the Cardiganshire Consols Mine meeting, on Monday (Mr. J. H. Murchison in the chair), the accounts showed a balance of liabilities over assets of 165*l.* 6s. Details will be found in another column.

At the South Lady Bertha Mine meeting, on Tuesday (Mr. Biggs in the chair), the accounts showed a balance of liabilities over assets of 238*l.* A call of 2s. 6d. per share was made.

At the St. John's United Copper and Lead Mining Company, Newfoundland, meeting, on Thursday, the report of the directors was adopted after an amendment for the winding-up of the company had been negatived. Upon a poll being demanded, it was agreed that it should be taken on Thursday next. Details in another column.

LEEDS, MARCH 7.—A fair amount of business has been transacted in Mining Shares. There have been active enquiries after good progressive mines, and offers made at advanced rates, but holders are not willing to sell except at good premiums. The result is a great margin between buyer and seller, and an unsteadiness of price in this description of stock.—Craven Moor, 4s. to 4s. 6d.; Hebden Moor, 1¼ to 1½; Merryfield, 4s. to 5s.; Wensleydale, 8s. to 9s.; Brea Consols, 18s. to 20s.; Hailenbeagle, 30s. to 40s.; Yorkshire, 18s. to 20s.—JOHN GLEDHILL AND CO.

COAL MARKET.—On Monday there were 46 arrivals. The market was dull for all descriptions of coal, at a reduction of about 3d. per ton on last week's prices. Best house coal, 20s. 3d. to 20s. 9d.; seconds, 18s. to 19s.; Hartley's, 15s. 6d. to 16s. 3d.; manufacturers', 15s. to 16s. 6d.—Wednesday: The arrival of 216 fresh ships caused a fall of fully 1s. per ton in prices generally, at which a good business was done. Best house coal, 19s. 3d. to 20s.; seconds, 17s. to 18s.; Hartley's, 14s. 6d. to 15s. 3d.; manufacturers', 14s. 6d. to 15s. 6d. per ton.—On Friday, 34 ships arrived. The trade was quiet, and all descriptions of coal qnote the same prices as on Wednesday. Hetton's, 20s.; Stewart's, 19s. 6d.; Kelloe, 18s. 6d.; Eden Main, 18s.; Hartley's, 14s. 6d. to 15s.; manufacturers', 14s. 6d. to 15s. per ton: 68 cargoes unsold; 100 ships at sea.

The importation of coals into London by sea in the month of February was 756 ships, containing 262,124 tons, being a *decrease* on the corresponding month last year of 31,038 tons. The importation by railways and canals in the month of February was 150,860 tons, being an *increase* over the corresponding month in 1860 of 35,192 tons.

The following is a return of the coals imported into London during the month of February:—

	Ships.	Tons.		Ships.	Tons.
Newcastle	272	102,278	Scotch	17	3,328
Seaham	89	14,955	Welsh	23	8,437
Sunderland	189	79,850	Yorkshire, &c.	26	2,684
Middlesbro'	18	5,678	Duff	4	1,186
Hartlepool and W. Hartlep.	125	37,533	Small	5	1,322
Blyth	12	3,417	Cinders	6	1,456
Total imported in February, 1861				756	262,124
Total imported in February, 1860—coal, culm, and cinders					293,162

COMPARATIVE STATEMENT OF 1860 AND 1861.

Imported from Jan. 1 to Feb. 29, 1860	1945 ships	640,124 tons.
Imported from Jan. 1 to Feb. 28, 1861	1622 ships	564,898 tons.
Decrease in the present year	323 ships	75,226 tons.

The following figures show the quantities of coals sent by the undermentioned collieries:—

	Ships.	Tons.		Ships.	Tons.
Dean's Primrose	19	6,202	Ravensworth Pelaw	10	4,947
Holywell Main	14	5,912	Haswell Gas	2	780
New Pelton Main	21	7,756	Lambton Gas	11	6,045
Pelaw Main	17	5,001	Wallsend Hetton	15	6,832
Pelton Main	14	5,821	Wallsend Lambton	46	21,506

CONTRACT FOR COAL.—The Admiralty require the supply of 1500 tons of South Wales Coal, for the Navy, at Halifax.

IRON PERMANENT WAY.—After a prolonged discussion, at the Institution of Civil Engineers, on the Result of Trials of Varieties of Iron Permanent Way, it was considered that iron permanent way, at the present moment at all events, was not one which could be safely recommended. All roads laid upon embankments, or in cuttings, were liable to subsidence, in a varying degree. It was impossible to believe, having a due regard to economy and efficiency, and to the fact of engines weighing 30 tons, travelling at from 50 to 60 miles an hour, under all the extremes of weather, of wet and of frost, that any system of permanent way could answer in the end which was not laid to a sufficient depth in the ground. The result of 25 years' experience went to show, that the double-headed rail, made of good materials, with properly proportioned chairs, and the joints of the rails effectively "fished," was as near to perfection as could be practically attained. In the construction of railways, the permanent way was that which, perhaps, had been the least attended to; and the greatest difficulty had been experienced in getting the consent of boards of directors to increase the expense of the way, in order to insure its efficiency. The hope was expressed that this discussion would have the effect of convincing boards of directors that some additional expense must be incurred in providing better materials for rails, sleepers, and chairs, than it had been hitherto possible to get them to sanction.

SUBSTITUTE FOR PLUMBAGO.—In a paper presented to the Royal Society by Prof. Crace-Calvert, an interesting discovery was announced—that from cast-iron a substance is procurable which is a substitute for plumbago. The professor soaks cubes of cast-iron in weak acid—vinegar being the most suitable—until the iron is dissolved out, and the carbon remains. By this process the cubes lose in weight, but not in dimension, and retain their form unaltered; but the quality is changed, and it is as easy to draw lines with one of them as with a lump of plumbago. Strictly speaking, it is not carbon, but a cyanide of carbon, which remains after dissolution of the iron.

LECTURES TO WORKING MEN.—GEOLOGY AND PHYSICAL GEOGRAPHY.—The lecture on Monday, by Professor Ramsay, F.G.S., was "On the Extinction of Species, and Breaks in the Succession of Life during the Geological Epochs." After giving a brief *resumé* of the subjects conveyed by former lecturers, the lecturer drew attention to the discoveries of the late Mr. William Smith in determining the superposition of strata, and the peculiar characteristic that each deposition is distinguished by its particular suites of fossils;—thus, the Silurian contains its trilobites, the mountain limestone its terebratulæ and encrinites, and so on through the permian, lias, and cretaceous epochs; and such is the certainty of these facts, that any formation may in consequence be easily identified. He now went on to consider the various theories adduced to account for the disappearance of those animal forms; a subject, he stated, which has never been thoroughly cleared up. Some suppose that the law which operates at the present day had equal reference in those early periods—that there was a period of youth, maximum development, and ultimate decay; others contend that those forms of life were created on the spot, and that by some inscrutable will of the Deity as suddenly died. In our investigations of Nature we find there are several physical changes in the geography of the world which may account for the disappearance of species. Thus, a change of climate may intrude such a degree of cold as to cause the destruction of animal life. Again, the sinking of the soil, and its subsequent submergence in the sea, may account for the extinction of terrestrial species. Further, the preying of one animal on another may in course of time perform a similar result; and referring to the acts of man, we have the historic record of the extinction of the dodo by the Portuguese settlers in the Isle of France. The lecturer now gave an interesting account of Dr. Darwin's "Origin of Species by the Process of Natural Selection," and showed how far he considered it tenable, in the still imperfect state of our geological knowledge; and in concluding he added that it had much to commend it, being closely in harmony with that progressive law whereby one thing of beauty gives place to another of a still higher order.

PUBLIC COMPANIES AND PROFESSIONAL ACCOUNTANTS.—The various commercial frauds which have come to light within the last few years have caused professional accountants to use novel efforts to secure increased business by the publication of interesting little treatises upon the advantage to be derived from the employment of themselves as official auditors. That their arguments are at all times tenable we will not attempt to prove, but that most of them have a very happy power of making them appear plausible we cannot deny. In referring to the work of Mr. James Hutton, a few weeks since, we mentioned the exaggerated estimate which was made that the services of one official auditor would render unnecessary the duties of other officers of the company; and in another pamphlet now before use, from the pen of Mr. Brandt (published by Mann, of Cornhill), equally fallacious conclusions are arrived at, owing to Mr. Brandt having taken as his leading question—"Is there a single instance known where a public accountant has failed in his duty, or where, through his neglect, extensive frauds have taken place?" instead of—"Is there a single instance in which the employment of a public accountant has prevented fraud?" Had the revised question been put, Mr. Brandt would have been equally justified in replying, No; but his arguments would then have had to take another direction. The duty and power of an auditor, whether official or otherwise, is to discover, not to prevent, fraud or error, and if he attempt anything beyond this he must signally fail. If the responsible officers of a public company be dishonest, the labours of an official auditor will be of little value in making known that fact to the shareholders.

PUMPS SUPERSEDED.—An apparatus, for which the inventor claims the most enormous powers, is proposed to be introduced by Mr. Robert Nelson, of Liverpool, the principle being the combustion of volatilised hydro-carbons to produce a vacuum, into which the water to be raised enters. A round cylinder made boiler fashion, closed at either end, is supplied with 160 gallons of water. The valve which closes the communication between the cylinder and the suction-pipe is connected by a chain to a "spray-valve," which prevents the water getting into the volatilising chamber, as it rushes through the suction-pipe into the cylinder. The spray and suction cannot both be open together. The volatilising chamber has a fire beneath it, and when the bottom plate is highly heated, the naphtha or hydro-carbon is admitted, volatilised, and exploded; the main cylinder, which is in communication with the volatilising chamber, being thus cleared of air, so as to allow the water to rush into the vacuum produced. A discharge valve is provided below the cylinder, to allow the water raised, if any, to pass out, and, as the inventor states, as soon as the discharge valve closes, the water rushes in at the suction-pipe, at the same time shutting the spray-valve, whilst a little more naphtha runs on the hot plate, vaporises, and produces a fresh vacuum, and these processes continue as long as the machine remains at work. Mr. Nelson declares that it would be very useful for potteries, brick-works, and as a safety-pump for ships. He continues—"I tried a vacuum-gauge on the cylinder, which shows 15 lbs. on the square inch; this vacuum would answer for boiling sugar, or it could be applied as a motive-power for a long up and down stroke, such as pumping water. I sent a plan to Wales the other day, which would do the work of a 20-horse engine, doing away with all the machinery, gearing, brick-work, boilers, coals, wear, &c., connected with the 20-horse engine. The plan I speak of was intended for a 70 yards lift." Mr. Nelson has forwarded us a series of diagrams to illustrate his description of his elevator and motive-power engine, which we cannot give space for, but no doubt our readers can, as he says "judge of the simplicity compared with a steam-engine."

MARIQUITA AND NEW GRANADA MINING COMPANY.—We believe that Mr. Powles has resigned both the chairmanship and direction; and it is said that Mr. W. Cox, late M.P. for Finsbury, has been solicited to put himself forward as Mr. Powles's successor. According to the Deed, five directors (the present number) is sufficient, therefore it will be for the shareholders first to decide whether an addition shall be made; if so, we believe the election will be sharply contested.

MINING IN MEXICO.—A letter from Guanajuato states that Governor Goblado has dedicated $400,000 of the capitals which lately belonged to the clergy for the working of mines. This sum has been placed in the hands of a junta, elected by the miners and reducers of ore in this place. This junta is to employ the capital without being in any way subject to the Government. In recompense for the donation the junta must give to the Government of the state one-fourth of the nett yearly profits. It is all important that the various ideas contained in the manifesto of President Juarez, relating to mining interests, be put into practice. Mining is the great vital interest of the country, on which almost entirely depend all others.

PRODUCTION OF QUICKSILVER—THE NEW ALMADEN MINE.—It is anticipated that ere long the working of this celebrated mine will be resumed; the litigation which has so long caused their suspension being now apparently drawing to a close. In 1859 an injunction was granted against the reputed owners of the mines, at the suit of an opposition claimant, and the works have ever since been stopped. In consequence of the stoppage of the New Almaden, several other mines—the Enriqueta, the New Idria, the Guadaloupe, &c.—have been successfully worked, yielding, in the aggregate, during 1860, upwards of 14,000 flasks of 75 lbs. each. The exports during the same period was 9350 flasks; the average price being rather over 2s. per lb.—at present it is a trifle lower. The metal has principally been sent to Mexico, China, and Valparaiso; the remainder, comparatively small quantities, going to Peru, Vancouver's Island, and Panama. The ordinary annual export varies from 20,000 to 27,000 flasks.

SALE OF MINE MACHINERY BY PUBLIC AUCTION.—On Thursday, Mr. Marsh sold by public auction the whole of the machinery of the Devon Kapunda Mine, consisting of a 40-inch cylinder steam-engine, water-wheel, &c., &c. It will be remembered by our readers that the company was constituted early in 1859, under the Limited Liability Act, and the works carried on since then in the hopes of the capital being sufficient to get the shaft to such a depth as would develope the sett. The original amount proved insufficient for that purpose, and further capital was raised, which has also been expended, without, however, succeeding in opening out the lodes to a profit; it therefore, became necessary at the last meeting that the directors should place before the shareholders a statement of their affairs, at that time giving them the option of subscribing further capital, with which they would be able to discharge a judgment credit, and proceed to sink the shaft, or agree to voluntarily wind-up the concern. The latter step was adopted, and the whole of the machinery placed in Mr. Marsh's hands for sale by public auction under a bill of sale. The room was well attended, and a brisk bidding ensued, the first offer being 300*l.* for the lot, which was ultimately knocked down to Mr. T. Nicholls, of Tavistock, for 870*l.*

An explosion of fire-damp took place on Saturday in the Parkhead Colliery, Dalziell, which ignited the coal in several of the workings, and up to the present time the fire is still raging.

The Duke of Somerset, in the course of a speech at the meeting of the United Service Institution, stated that the Government has appointed a commission to look into the qualities of iron.

RAILWAY CALLS.—The amount falling due in March is 470,655*l.*—making the total for the three months of 1861, 3,409,309*l.*

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending March 3, was 10,519*l.* 11s. 2d.

THAMES TUNNEL COMPANY.—Receipts for the week ending March 2, 67*l.* 15s. 6d.; number of passengers, 16,266.

LEAD ORES.

Sold on the 4th March.

Mines.	Tons.	Price per ton.	Purchasers.
Frongoch	67	£12 11 0	Mining Co. Ireland.
Cwm Erfin	60	15 10 0	Panther Co.

BLACK TIN.

Sold on the 16th February.

Mines.	Tons	c.	q.	lbs.	Price per ton.	Amount.	Purchasers.
Charlestown Utd.	6	12	3	12	£70 15 0	£ 469 19 8	—Enthoven & Sons.
Sold on the 28th February.							
W. Wh. Margaret.	0	18	2	11	68 10 0	—	—Bolitho & Sons.
ditto	0	3	3	9	30 0 0	—	— ditto
Sold on the 1st March.							
Ashburton United.	7	1	3	20	75 4 6	533 16	6—Calenick Co.
ditto	6	1	2	14	75 12 6	459 17	9—Bissoe Co.
ditto	7	1	3	3	75 4 0	533 1	6—Harvey & Co.
Sold on the 2d March.							
Charlestown Utd.	13	14	3	7	70 15 0	972 3	0—Enthoven & Sons.
Guriyn	1	16	1	5	72 0 0	130 13	2—Chyandour.
Sold on the 6th March.							
Wendron Cons.	21	2	2	9	—	1521 7	0— ditto

COPPER ORES.

Sampled Feb. 20, and sold at the Basset Arms Hotel, Pool, March 7.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Wheal Clifford	101	£8 18 0	Wheal Basset	23	£5 12 0
ditto	100	8 15 6	South Tolgus	63	10 1 6
ditto	96	6 9 6	ditto	57	7 19 0
ditto	92	5 18 6	ditto	51	4 8 6
ditto	75	4 15 6	ditto	50	7 6 0
ditto	74	4 1 0	North Roskear [Enys	59	9 11 6
ditto	58	8 14 0	ditto	48	17 2 6
ditto	18	7 4 6	ditto	20	2 18 6
West Seton	96	9 11 0	Pendarves	53	4 3 6
ditto	82	7 16 6	Basset	36	4 6 6
ditto	78	4 19 6	East Basset	73	7 18 6
ditto	77	8 14 6	ditto	50	6 15 0
ditto	62	6 18 6	ditto	48	15 19 0
ditto	60	2 18 0	Wheal Seton [Pendarves	63	4 16 0
ditto	57	2 18 0	ditto	62	5 4 6
ditto	50	7 5 6	ditto	15	12 2 6
South Frances	92	5 12 6	West Stray Park	73	7 15 6
ditto	57	7 7 6	ditto	41	6 16 6
ditto	50	6 3 0	Tolcarne	44	6 17 6
ditto	41	8 2 6	ditto	34	4 7 6
ditto	28	7 0 6	Tresavean	65	2 15 0
ditto	22	3 9 6	North Wheal Crofty	65	4 4 0
Wheal Basset	82	5 15 6	Wheal Harriett	54	5 12 6
ditto	65	6 9 0	South Basset	38	3 5 6
ditto	51	8 0 6	Great Onslow Consols	10	4 12 6
ditto	24	16 1 0	Tretoil	9	5 12 6

TOTAL PRODUCE.

Wheal Clifford	614	£4235 11 6	West Stray Park	114	£847 8 0
West Seton	562	3750 14 6	Tolcarne	78	451 5 0
South Frances	290	1851 13 0	Tresavean	65	178 15 0
Wheal Basset	246	1821 17 0	North Crofty	65	273 0 0
South Tolgus	221	1678 11 0	Wheal Harriett	54	302 15 0
North Roskear, &c.	216	1822 8 0	South Wheal Basset	38	124 9 0
East Basset	171	1681 12 6	Great Onslow Con.	10	46 5 0
Wheal Seton, &c.	140	808 4 6	Tretoil	9	50 12 6

Average Standard ..... £126 9 0 | Average Produce 7⅛
Average Price per ton £6 18 0
Quantity of Ore ..... 2893 tons | Quantity of Fine Copper, 220 tons 10 cwt.
Amount of Money £19,926 1 6
LAST SALE.—Average Standard ..... £129 12 0.—Average Produce 6⅞
Standard of corresponding sale last month, £130 8 0.—Produce, 6⅜.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal Company	138½	£ 398 17 8
Vivian and Sons	316½	2440 8 3
Freeman and Co.	103½	701 4 8
Grenfell and Sons	111½	699 6 3
Sims, Willyams, and Co.	126½	1351 12 3
Williams, Foster, and Co.	467½	3219 1 11
Mason and Elkington	559	3883 0 3
F. Bankart	298	2320 7 6
Copper Miners' Company	562	3906 3 9
C. Lambert	74	299 14 0
Sweetland and Co.	136	736 5 0
Total	2893	£19,926 1 6

Copper ores for sales on Thursday next, at Tabb's Hotel, Redruth.—Mines and parcels.—West Basset 612 Great Wheal Alfred 341—Parr Consols 310—Tolvadden 302—Alfred Consols and Leity 288—West Alfred Consols 169—Wheal Margery 161—Copper Hill 144—Wheal Buller 113—Great South Tolgus, 111—North Basset 77—Wheal Anna 71—Wheal Agar 64—East Rosewarne 55—Clijah and Wentworth 51—South Crenver, 39—West Trevelyan 37—Wheal Uny 30.—Total, 2975 tons.

Copper ores for sales on Thursday week, at the Royal Hotel, Truro.—Mines and parcels.—Devon Great Consols 1531—Phœnix 354—West Caradon 320—Hingston Down 301—Marke Valley 281—Holmbush 229—Lady Bertha 226—East Russell 201—Bedford United 200—Gunnis Lake (Clitters) 178—Wheal Emma 176—Wheal Friendship 162—Okel Tor 160—South Bedford 150—East Caradon 141—Collacombe 110—Kelly Bray 84—Hawkmoor 87—Fursdon 60—Wheal Franco 45—Gawton 40—Devon and Courtenay 20.—Total, 5056 tons.

FIRST SALE IN MARCH.

Years.	Tons.	Prod.	Amount.	Standard.	Ore copper.	Cake cop.
1851	3487	7¼	£16,463 12 6	£103 3 0	£65 4 0	£84 0
1852	3250	7	16,667 3 6	111 18 0	72 17 0	88 10
1853	3233	6½	23,714 8 0	164 9 0	119 2 0	135 0
1854	2685	5⅝	16,037 10 0	147 13 0	101 2 0	126 0
1855	2443	7⅛	17,962 10 0	139 6 0	101 7 0	126 0
1856	3120	6¾	20,473 8 6	138 2 0	97 5 0	126 0
1857	2918	6¾	21,511 7 6	150 3 0	109 7 0	135 0
1858	3067	7	21,160 14 0	137 12 0	98 8 0	117 0
1859	3426	7¼	25,646 10 0	137 10 0	100 11 0	112 10
1860	2782	6¾	16,820 6 0	139 15 0	96 2 0	117 0

The copper in the ore expresses the nett price per ton of copper paid to the miner.

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The wealth which has from time to time been extracted from the Mountains of Wales has elevated many men from the lowest ranks of life to affluence and independence, created squires and baronets, and added grandeur to the equipages of noblemen.—PARRY.
We are glad to find our old friend coming so prominently forward as an advocate for investment in slate quarries, and we can have no hesitation in recommending his small pamphlet as well worthy of attention. The author, who has been long engaged in slate quarries, has in a few pages brought before the public the position of the slate trade, as one that recommends itself in the most tempting form to capitalists for investment. The leading features of this small pamphlet go to show that the demand for slate exceeds at the present time any former period; that the supply is utterly inefficient for the wants of the trade; that the prices are high beyond all precedent; that the profits realised by most of the large quarry proprietors are upwards of 50 per cent.; and that extensive opportunities exist for opening other large quarries, and increasing the supply; but the work should be read to be appreciated. We can in a great measure confirm the statements made by Mr. Smith, from numerous correspondents who have from time to time induced us to draw attention to the wants of the trade, and the rare opportunity that exists for public companies to embark in this profitable branch of our commerce.—*Mining Journal.*
London: Printed and published by Ward, Brothers, 56, Bartholomew-close, E.C. and to be had at the author's, 5, Warnford-court, Throgmorton-street.

Price Sixpence,
SUGGESTIONS AS TO THE APPOINTMENT BY THE LEGISLATURE OF PUBLIC ACCOUNTANTS, TO AUDIT THE ACCOUNTS OF ALL JOINT-STOCK COMPANIES.
By JAMES HUTTON, Public Accountant.
These Suggestions deserve perusal, as conveying practical experience on this important question.—*Standard*, Feb. 11, 1861.
Mr. James Hutton, professional accountant, has just issued, through Messrs. Letts, of the Royal Exchange, a pamphlet of "Suggestions as to the Appointment by the Legislature of Public Accountants, to Audit the Accounts of all Joint-Stock Companies," which contains a vast amount of information of utility to the secretaries and other officers of public companies, and carefully-considered rules as to the mode in which accounts should be kept and audited. He considers that, with an efficient staff of clerks, a continuous audit might be made by officially appointed auditors, and that the value of share property would be enhanced. In fact, taking the book as a whole, we may truly say that the details of the duties of the auditor are so carefully laid down, that if they were carried out secretaries and directors might be dispensed with, as the auditor would really be the only responsible officer, the clerks becoming in his hands the entire machinery necessary for conducting joint-stock enterprise.—*Mining Journal*, Feb. 16, 1861.
However honourable and pains-taking the auditors and accountants belonging to a company may be, it is not within the bounds of possibility that they should have that keen and sweeping scope of vision, that power of summarily lighting on errors, that faculty of rapidly judging from deductions, which only long experience and the adoption of book-keeping as a profession can give. We repeat that the bank recently defrauded need not have lost its £65,000 had these public examiners been called in.—*Daily Telegraph.*
The writer evinces great familiarity with his subject, and advances powerful arguments in support of his views. As might be expected, his *cheval de bataille* is the railway system, and he goes into that question with great minuteness. The pamphlet is full of interesting matter, and will repay an attentive perusal.—*Liverpool Albion.*
There is much in the pamphlet which deserves attention.—*Morning Star and Dial.*
To all commercial men, and to those having an interest in joint-stock companies in particular, the appointment of public auditors must at once recommend itself as being the best way of checking those frauds which have been so numerous and extensive of late years. An auditor in such concerns would act like a "steam governor," as, while ensuring greater certainty in their movements, his surveillance would have a tendency to prevent such disastrous explosions as frequently occur. Mr. Hutton's pamphlet contains some valuable hints bearing on the various kinds of public companies, but he devotes the greatest share of his attention to railways, and in doing so points out the glaring defects in their present system of auditing. To commercial men generally these suggestions will prove of value, and we have pleasure in bringing them under notice.—*Fife Independant.*
Having referred to the audacious frauds committed by public companies, Mr. Hutton proceeds to offer some suggestions for arresting the number of such occurrences; they are well deserving the attention of all shareholders in public companies. Mr. Hutton cites Mr. Spackman and other eminent authorities in support of the views advocated.—*Innkeepers and Travellers' Magazine.*
London: Letts, Son, and Co., 8, Royal Exchange, E.C.

NEW GEOLOGICAL WORK.

A geological work of some interest to the iron trade, treating of the ironstone of the Cleveland district, North Yorkshire, is about to be published by Mr. A. Reid, of Newcastle-upon-Tyne, from the pen of a gentleman every way qualified for the task, which promises, we understand, to add much additional information of a valuable character to our geological knowledge respecting that interesting locality, which has been the scene of the author's labours for many years, and, therefore, all interested in the subject may anticipate its perusal with pleasure. Those who have perused the MS., and who are well versed in the iron trade of the district, speak highly of the work.—*Mining Journal.*

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Notices to Correspondents.

*** Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

WHEAL BULLER AND THE GREAT MINES.—To save a recurrence of the misfortunes too frequently befalling shareholders, I would suggest a remedy, and one easily accomplished—that Devon Great Consols, with Wheal Buller, Dolcoath, and the other similar adventures, should periodically, say at least every month, send a report to be published in the Journal, then the public would not be so completely in the dark, and take such unfortunate leaps in the dark as they now do. I take a case in point: it is generally understood that the lode has failed at the Buller shaft. What do the public know of this?—A FRIEND TO MINING.

TO THE COMMITTEE OF EAST TAMAR MINE.—I have been given to understand that the main prospects of this property consisted in driving the lowest level, now recently commenced driving, and that the prospects are exceedingly good. As a large shareholder from the first, I respectfully suggest to the committee to reconsider their determination to stop the mine until this level has been explored, feeling convinced their money will be returned by prosecuting this level.—A GEOLOGIST AND SHAREHOLDER.

NORTH LAXEY MINES.—There are several inaccuracies in the letter of "Constant Reader." If the writer will apply at the office, he will get his errors corrected, and any information about the company he may require.

MACHINE PUDDLING.—I think your Staffordshire correspondent must be in error in describing Messrs. Walker and Warren's patent as identical with Mr. Tooth's, although they are certainly somewhat similar. The sole reason which would induce anyone to suppose that they were absolutely identical is the appearance of the outside, for upon looking at the interior it will at once be seen that Messrs. Walker and Warren's machine is decidedly the best of the two, for whilst Mr. Tooth's churn would only cause the iron to flow in one direction, precisely in the same way as a little water would run in a rolling barrel, the machine of Messrs. Walker and Warren is so formed in the inside that a movement in the iron something more like puddling is obtained—that is to say, the mass has a motion from one end to the other of the cylinder, as well as a revolving motion. If, then, this failed in practice, how can Mr. Tooth hope for success?—J. T.

MANUFACTURE OF IRON.—Although I have read your very flattering notice of Mr. Tooth's invention for puddling without manual labour, there are several questions which I think require answering before its general adoption should be thought of. You did not state the character of pig-iron operated upon, so that an opinion might be formed as to the power of the machine. I recollect when some foreign invention for converting pig-iron into steel was tried, a very complete success was obtained, but it arose from the very best stony charcoal pig (supplied by the East Indian Iron Company) being used in the experiment. Perhaps Mr. Tooth's invention is, upon the same principle, only applicable to iron which requires very little manipulation. I have seen experiments with the invention of which Mr. Tooth's is an imitation, and I have read the specification of Mr. Tooth's patent, which has become void, and I unhesitatingly say that in my opinion the cost of puddling, according to Mr. Tooth's system, would be equal to that at present paid, *plus* the cost of the machine, which I should expect ere long to have to convert into merchantable bars. Until the inventor has proved at his own expense that there is the economy he would infer, I, as an ironmaster, should certainly prefer the already tested manual labour.—E. J. B.

FALMOUTH AND SPERRIES.—In the report in your excellent Journal of last week you state that the costs were charged up to the end of December last, and the credits to Feb. 25 last, the day of the account. This is not the fact; the costs and credits were both charged and credited to the end of December.—JOHN TIPPET, Purser.

WHEAL GRENVILLE.—We believe the accounts have always been charged up at every meeting, and that the mine has been in every way properly conducted. "One of the Sufferers" should apply at the office, when the Secretary will afford any information that may be required.

MOLLAND MINE.—I have carefully watched the progress of affairs here for some time past, having borne in mind, or rather never having been enabled to efface the impression conveyed by the description of a well-known broker, backed up as it was by some very fine specimens then fresh broken from the lode. From that time to the present the old system has been adopted of miserably small calls being made, the amounts realised thereby being entirely insufficient for anything like a proper development of the lodes. I had hoped that as the levels were opened out deeper the disordered ground would be got through; but from the system adopted, that step, which might have been accomplished long ere this, is still in progress, and a continuance of calls to be looked forward to. By-the-bye, I see no notice in your last of a rumoured explosion, said to have taken place during the past week; is such the case?—A. N.

LAGUNAZO MINING COMPANY—"T. B."—This company was formed under the guidance of Mr. Evan Hopkins, who knows the property well, having throughly examined it, in Spain. The directors have just made a call of 2s. 6d. per share.

NORTH TRESKERBY MINE.—I understand that subscriptions for a testimonial to Mr. Webb are now being made; and I trust that the object will be liberally supported by all who wish to maintain the principles of honour and propriety, in connection with mining.—A MINER.

ROSEWALL HILL AND RANSOM UNITED.—No meeting as yet, and, so far as I can learn, no notice of any on the part of the management. This system induces the belief that the affairs are not in any way encouraging, and that there is an amount of diffidence on that account being displayed by the purser. It will, therefore, not much surprise him if a meeting should be called without his sanction, or rather his being requested to call one.—A SHAREHOLDER.

QUARTERLY SALES—"C. F. N." (Bath).—The quarterly sales of black tin and lead are as regularly given as those of copper. By referring to the Journal of Feb. 2, page 76, he will find the sales for the last quarter of 1860.

CHEMISTRY—"D. H." (Dortmund).—We know of no English dictionary treatise on chemistry equal, for the use of a German, to those of his Vaterland. The last published in this country is that of Dr. Muspratt, who studied at, or at least received a degree from, Giessen; this has been translated into German by Stohman, and is, we believe, just completed and published at Leipsic.

The TEES SIDE report has not reached the office in time for publication.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, MARCH 9, 1861.

The following are the Government Returns of the exports of articles identified with mining, the produce and manufacture of Great Britain, for the month ending Jan. 31, 1861; and also as compared with the month ending Jan. 31, 1860; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—

DECLARED VALUE FOR THE MONTH ENDING JANUARY 31.

	1860.		1861.		Decrease.
Coals and culm	£ 194,071		£ 196,609		—
Hardwares and cutlery	243,105		230,973		£12,132
Machinery:—					
Steam-engines	£ 56,843		£ 44,081		
Other sorts	213,828 = 270,671		170,436 = 214,517		56,154
Total	£ 707,847		£ 642,099		
Metals:—Iron—Pig	£ 43,379		£ 46,517		
Bar, bolt, rod	140,660		98,699		
Railway	152,415		183,269		
Wire	20,771		13,441		
Cast	40,199		32,252		
Wrought	162,021 = 559,445		175,007 = 549,185		10,260
Steel	71,841		30,076		41,765
Copper—Unwrought	99,070		52,714		
Sheets	114,507		67,922		
Wrought	19,801 = 233,378		14,253 = 134,889		98,488
Brass	11,770		11,881		—
Lead—Pig	38,405		24,119		
Ore	10,666 = 49,071		8,503 = 32,622		16,449
Tin—Unwrought	25,402		20,311		
Plates	100,996 = 126,398		36,596 = 56,907		69,491
Grand total	£1,759,750		£1,457,659		£304,739
Less increase—coals and culm, 2538*l.*; brass, 111*l.*					2,649
Total decrease					£302,090

The returns of the Board of Trade, with respect to the imports and exports of the country for January of this year, have just been issued, but do not furnish any particular matter for comment. They show a falling off in our exports as compared with the corresponding month of last year, but this was fully anticipated, and is easily accounted for by the great stagnation of traffic in railways and canals which was occasioned by the continuance of the frost, thereby producing a corresponding influence on the shipments from our ports. The total declared value of exports for Jan., 1861, is set down at 8,344,701*l.*, whereas in Jan., 1860, it was 9,366,497*l.*, so that this year presents a falling off of 1,021,796*l.* as compared with the past, and 1,248,722*l.* as compared with 1859, when the total was 9,593,423*l.*

Of articles identified with mining we find that in Jan., 1860, the exports were valued at 1,759,750*l.*, and in the same month of this year they are given as 1,457,659*l.*, so that there is a decrease of 302,090*l.*, after allowing for an increase in coals and culm of 2538*l.*, and in brass of 111*l.* Copper presents the greatest deficiency, being 98,488*l.* less than last January. Tin was 69,491*l.* under 1860; machinery, 56,154*l.*; steel, 41,765*l.*; lead, 16,449*l.*; hardwares and cutlery, 12,132*l.*; and iron, 10,260*l.* under the total of the same month of 1860.

Of gold and silver bullion, and specie, it appears we imported the computed value of 1,867,015*l.*, and exported 3,358,702*l.*, so that the balance is against this country on the month's account to the extent of 1,491,687*l.* This arises chiefly from the large amount transmitted to the United States, whence we usually received largely in excess of our exports, but in these returns it is shown we shipped 1,411,478*l.* to, and received only 2730*l.* (entirely in silver) from the United States, whereas our remittances were 1,408,190*l.* in gold, and 3288*l.* in silver. France took 692,801*l.*, and sent us 198,301*l.* Egypt, in transit for India and China, received 1,091,532*l.*, and forwarded only 428*l.* Mexico, however, gave us 826,697*l.*, and Australia 821,569*l.*, without any return from us of the same commodity. The transactions with the other countries were unimportant.

The mode of appointing the GOVERNMENT INSPECTORS OF COAL MINES was formally brought before the House of Commons by Mr. DILLWYN (whose enquiry, together with the reply of Sir G. C. LEWIS, was published in the MINING JOURNAL of last week), and we think the information elicited cannot fail to increase the confidence of all connected with colliery workings that the Inspectors are fully competent to fulfil the duties of the very responsible office to which they have been appointed. The only inference which can be drawn from the step taken by Mr. DILLWYN is that he is the instrument of the Civil Service Examiners, who feel that in the confirmation and gazetting of the appointment of Mr. J. P. BAKER (he had been appointed before that board was called upon to examine him) their prerogative has been interfered with; but as the result of the discussion has proved that reliance upon the judgment of the Civil Service Examiners would have caused the rejectment of a man of sound practical attainments, and who is thoroughly capable to perform the duties of a Government Inspector, it may, probably, be regretted that the question was ever mooted. It cannot be doubted, however, that Mr. DILLWYN, in arriving at the point at which he aimed, offered some suggestions which are deserving of the most serious consideration, and which, if adopted, could not fail to bring about that result which not only Mr. DILLWYN, but every member of the House, so much desires—a diminution in the number of accidents in collieries.

The subject of prohibiting the employment of other than Government Certificated Officers in Collieries was fully referred to in the MINING JOURNAL at the commencement of the present year, and we are glad to find that Mr. DILLWYN has now publicly expressed in the House of Commons an opinion (and from his intimate connection with the coal mining interests no one can be better able to give an opinion) to the effect that it is only from some such arrangement that we can hope to reduce the number of deaths from accidents in collieries to the minimum. "Personally," he said, "he was not in favour of the present system of colliery inspection, and, therefore, he was not surprised at the number of colliery accidents that occurred. Colliery Inspectors were placed in a very awkward position—they had too much to do, in consequence or the size of their districts, and, moreover, he did not think it was wise to take the responsibility off the shoulders of the owners, which was the result of the appointment of Inspectors. What he would suggest was that every colliery owner should be compelled to have an underground overman, who had passed an examination and proved himself competent for his position. Masters of vessels, who have half-a-dozen lives under their control, pass an examination; but, in the case of collieries, the lives of hundreds of men are usually entrusted to some ignorant, uneducated man, who had the confidence of his employer, but knew not how to act so that every precaution should be taken." It is admitted that the safety of collieries is, at least to a great extent, dependent upon the intelligence and judgment of the officers of the colliery; and where there are so many circumstances, pecuniary and other, to influence a large majority of the employers in the selection of their officers, it cannotbe even hoped that the wished-for result will be attained by voluntary actions on the part of individual coalowners.

But to return to the appointment of Mr. J. P. BAKER. The complaint was that he had not been examined before he was appointed; but the grounds of complaint appeared far less substantial in consequence of the remarks which followed. The Civil Service Examiners did not feel themselves competent to examine him, and they called in a practical scientific to assist them; the result being that he was rejected as not at all acquainted with the science which any man holding such a position ought to be. The examination, as Mr. DILLWYN supposed, had reference to the *practical* performance of his duties; but in this respect we certainly think that he must have been misinformed; for surely it would be as unjustifiable to ask the board of Civil Service Examiners, notwithstanding the aid received from a Cambridge graduate with sound theoretical knowledge, to decide upon the *practical* competence of a Government Inspector of Coal Mines, as to expect an uneducated collier to translate the Odes of HORACE. There are, however, many scientific subjects on which an Inspector should be required to pass an examination; for, doubtless, the possession of scientific knowledge bearing upon the occupation in which he is engaged is of paramount importance, but to *substitute* scientific for practical knowledge would be more dangerous than to rely upon practical knowledge alone. Upon this point Mr. NEWDEGATE made a few very appropriate remarks. "He did not wish to express any opinion on the appointment of Mr. BAKER, except to say that testimonials were given in his favour by the most competent judges. He maintained that it would have been difficult for the Government to appoint any board of examiners competent to test the efficiency of a person for the office of Inspector of coal mines. For that position a great deal of practical knowledge was required, in order to enable a man to become aware of, and to be able to deal with, indications of danger; and, without practical knowledge, all the scientific knowledge in the world would not enable a person to become acquainted with the state of a colliery."

If Mr. BAKER had not possessed the scientific knowledge necessary to enable him to fulfil the duties of his office properly, the Secretary of State has power to dismiss him immediately; but Sir GEORGE LEWIS stated distinctly that he found he had had great experience in mines (we believe he was for many years a butty in the district), and it is probable that he also satisfied himself that the subjects in which Mr. BAKER failed were not likely to render him better able to fill the office with satisfaction to the country. In referring to the subject, Mr. DILLWYN laid great stress upon the fact that in the Durham district there was one violent death to every 142,000 tons of coal raised, whilst in Mr. BAKER'S district there was one violent death for every 37,000 tons raised; but he forgot to add that in Mr. BAKER'S district the system of working is very different to that of the North, and that even the attempts to introduce into the existing "Act for the Regulation and Inspection of Mines" compulsory measures, which would partially have remedied the evil, were thwarted by the South Staffordshire coalowners. Had the "long wall" system of working been introduced into Staffordshire, which was so strenuously advocated by Mr. BROUGH whilst he had charge of the district, and which has given excellent results wherever it has been adopted, and at the same time an improved system of winding, Mr. DILLWYN would not, we think, have had figures so favourable to his argument to refer to.

FROM PAPER TO HOPS.—It is in the very nature of parliamentary matters that there should be most remarkable inconsistencies, and as most remarkable reverses. Last year the excitement consequent on Mr. Gladstone's proposal to give up the duties on paper induced as energetic an opposition as could be imagined from the British paper manufacturers, who, afraid of competition, asserted that the repeal of those duties would ruin them, as much as the British farmer was ruined by the cheap loaf: and now the paper duties remain. This year the same parties, or a considerable section of them, elated by the last year's parliamentary skirmishing, and forgetful of the principle they then fought for—*i. e.*, that the state of the finances would not permit of the loss of a large amount of public income—identified and enrolled themselves with the distressed British hop-grower, and inverting their own arguments, prayed for a remission of taxation on hops! They reckoned without their host, Mr. Disraeli, who aided the anti-paper repeal so much last year, reminding them himself, in his speech, of the difference between the two cases, and voting against them: figures—hop repealers, 110; against, 202. And now the poor British farmer, who really had a good case for some modification, must grow his hops and pay his duty, for, inasmuch as that because Mr. Chancellor of Exchequer Gladstone was not allowed to give up the taxes on knowledge, he cannot be expected to be wasteful of the Duty on Beer.

The TRAMROAD SCHEMES may now be considered virtually shelved for this session. The Chairman of Committees, on Tuesday, put a question to the Home Secretary, consigning to the pigeon-holes of the lawyers these attempts at interference with the common law by private bills; the question was—Did Government intend to propose to Parliament some measure for enabling parties having control of the highways to consent to tramways in public streets? The answer, in effect, was—It had been suggested to put a clause in the Highway Bill, but this was not considered the way to deal with it, that it required more consideration, that no decision could be given yet as to any plan this session. The question and answer both imply that in the opinion of the Chairman of the Committees of the House and of the principal Secretary of State, the parties now having "the control of the public streets," have no power to give consent to iron railways and tramways being placed thereupon; and also that the highways or

public streets cannot be interfered with, except by a public Act of the Legislature. What will "the parties" who gave Mr. Train permission to lay down rails in the Uxbridge-road, London, say to this? And if such parties have only "control" as trustees for the public, what answer can a London vestry make, if called upon to give an account of the piece of ground at the north-west end of Portland-road, absorbed by the Metropolitan Railway, and intended to be converted into a railway station? This, of course, supposing the railway company's private Act did not contain a suitable clause concerning such public property.

The remarks made last week as to the Thames Embankment were echoed by several Members of Parliament, in the short debate which occurred on that subject last Friday evening in the House of Commons.

METALS AND ALLOYS.

There is probably nothing in which the Commissioners of Patents have rendered more essential service to inventors than in the publication, in a cheap form, of the abstracts of the whole of the specifications which have been filed relating to some particular class of inventions. We have upon several previous occasions referred to the abridgements relating to Iron and Steel, Marine Propulsion, Aids to Locomotion, &c., and we have now before us a volume, which we are sure will be duly appreciated by the entire mining community, entitled "Metals and Alloys." The information contained is of a nature which we think might be made even pecuniarily valuable to mine adventurers, for in a very limited space the facts recorded are so innumerable that the pages cannot be read without such an amount of knowledge being acquired as will enable the reader to form at once an accurate opinion whether a given process is old or new, and to a great extent whether it is practicable or otherwise. The metals, iron and steel alone, occupied an entire volume; and that now under consideration completes the history of the patents connected with every branch of metallurgical industry.

Up to the end of 1859 nearly 20 patents were taken for various processes connected with the manufacture of aluminium—the earliest being that applied for, for a correspondent, by Mr. Wm. Johnson, on April 1, 1854, wherein it was proposed to employ the metallic vapours of cadmium, zinc, and mercury in the reduction of ores and salts of magnesium, aluminium, sodium, potassium, and other earthy and alkaline metals. Again, the amalgamating processes, which were at one time looked to with so much interest, as likely to afford immense profits, would be an interesting subject for study. The number of patents coming under this head amount to no less than 63, Berdan and Bursill being the inventors of whom the public have probably the most vivid remembrance. There will also be found minutely described the various inventions for smelting, coating metals, furnaces, crushing apparatus, extracting gold, washing and sifting apparatus, as well as for various useful and interesting processes connected with the working of metals.

About the begining of the seventeenth century the question "How long will our timber last?" was one that occupied the place which "How long will our coal fields last?" enjoys at the present time, in consequence of which there is observable in almost every specification relating to the consumption of fuel either a strenuous attempt to economise or to substitute some other fuel for wood. On August 13, 1630, Messrs. Ball, Lassell, Hampton, and Anley claim the "meanes soe to prepare and order the fuell of peate or turffe, by reducing it into a coale," and this was to be a substitute for wood, charcoal, pitcoal, or sea coal, in smelting iron, lead, and tin, boiling salt, and burning bricks, tiles, and lime; and only two years afterwards Mr. Edward Jorden obtained a patent for "a way to melt tynne, iron, lead, and copper oare with pitcoale, peate, and turffe," professing to "doe yt with much lesse charge than is nowe expended in melting the same." Again, in 1636 we find a patent granted to Sir Phillibert Vernatt for substituting fuel other than wood in the working of "iron, steele, brasse, copper, tynne, leade, and all other kind of oare-mettle and metallique concocons, and for casting ordinance;" and in 1638 there were two patents, those of Horsey, Ramsey, Foulke, and Dudley, and of Fredericke Wagoner, for treating metals with peat. There is then a lapse until 1673, when Sir Nicholas Slanning propounded "a much cheaper and more excellent way then hath hitherto bin vsed or put in practice by any for melting, casting, refining, and forging of iron, and other mettall with turff and peate charked," &c.—the invention, probably, referring to a peculiar kind of furnace, of which no description was given. After this we find no reference to peat as a smelting fuel in connection with metal patents even until the present time.

The volume is so replete with interesting facts that we could not do justice to it in a single article, each of the many scores of classes indexed being of itself sufficient to afford useful reading for the leisure hour; we shall, therefore, take other opportunities to describe the more important of the inventions alluded to, giving more especial attention to the attempts which have been made to utilise the so-called useless metals, or those which do not at present find a place in the market.

IMPORTANT SCIENTIFIC DISCOVERY.

NEW MODE OF ANALYSIS—CONSTITUENT PARTS OF THE SUN.

Everybody talks about the advancement of science and the extraordinary progress of invention. Railways and the electric telegraph afford trite examples of what has been done in the present age to distinguish it from all that have gone before, and improvements are sometimes suggested on those inventions by which a submarine tunnel may convey us to America, and electric signals be exchanged with the moon; but there are comparatively few who attend to, or care for, the gradual strides which science is making to bring us more and more closely acquainted with the mysteries of nature. If, indeed, a telescope were to be invented that would enable us to see the men in the moon, or to behold the fairy-like figures that trip along the surface of Jupiter, the happy inventor would be *fêted* and lionised, his observatory would be crowded, all the world would be mad to do him honour, and it is possible that even in England he would receive some substantial testimony of public regard. But those who, by patient and toilsome exertion of their intellects, throw new light on science, and discover principles to be afterwards applied to benefit mankind, may continue their labours unregarded, though they tend, perhaps, more to elucidate valuable truths than a telescope which would show us the inhabitants of distant worlds. One of these discoveries, the result of diligent research, has been recently made, which, while it opens entirely new modes of investigation to men of science, is sufficiently marvellous in the results already attained to excite public attention.

Two German chemists, working together in their laboratory at Heidelberg, have analysed the body of the sun! Fabulous as it may seem, this is literally true. The accomplishment of such a feat might be thought more difficult than the construction of the far-seeing telescope we have spoken of. It seems to imply that they must by some supernatural agency have obtained a fragment of the substance to be analysed. It was, however, by no cabalistic arts that these alchemists of modern days achieved their wonders. They arrived at the results of their analysis without employing crucible or alembic, without the aid of either acid or fire, and solely by close examination of the rays of light, in the manner we shall now explain.

It had been discovered several years ago, by another German philosopher, that the solar spectrum exhibits numerous dark lines, crossing it in parallel directions, at certain though irregular distances apart, and of various thicknesses. These lines were conjectured to be occasioned by the absorption of some of the rays of light in those parts of the spectrum by causes unexplained. Further researches have made known that the rays emanating from other sources exhibit different spectra when decomposed by a prism, each kind of light having its peculiar and distinctive spectrum. The variously coloured lights produced by the combustion of the metals, for example, when they pass through a glass prism, and the images are received on a white screen, present separate spectra which never vary for each metal. This distinctive property is so well preserved that when the light produced by the combustion of several metals mixed together is decomposed the several spectra are maintained separate, and the combined yet distinctive image shows the spectrum of each metal as separately as if its light alone were decomposed. By varying the experiment, this combined coloured spectrum may be converted into a negative image of dark lines only. This is done when the rays of a more powerful light pass through the coloured flame. The dark lines thus formed correspond exactly with certain of the dark lines in the solar spectrum. It is, therefore, inferred that the lines observed crossing the decomposed coloured light are caused by the absorption of portions of the intense light from the body of the sun in passing through incandescent vapours that surround it. Proceeding on that hypothesis, those hitherto inexplicable dark lines have been closely scrutinised, in order to discover whether they correspond with the spectra of the metals. It has by this means been ascertained that the negative spectrum of iron exactly coincides with a certain number of those lines; that the spectrum of nickel coincides with others of the dark lines; and that the negative spectra of magnesium, sodium, and of some others of the metallic bases of the earths also have their exact counterparts in the solar spectrum. By this means it is ascertained, in a manner quite convincing to those who have witnessed the experiments, that the body of the sun contains large portions of iron and of other metals and earths common on this globe of ours.

The gradual steps in the progress of discovery and investigation which have led to this bold induction from observed phenomena present a striking example of the manner by which each successive discovery opens the way to others, and affords additional ground for hope that ere long many of the hitherto inexplicable mysteries of Nature may be penetrated by the accumulated forces which Science is daily bringing to bear on them. When NEWTON discovered the compound nature of light, and decomposed it into its various colours, he could not have imagined any relation between that discovery and the analysis of the component parts of the sun, nor could FRAUNHÖFER have conceived, when he observed the dark lines in the spectrum, that they were pregnant with meaning. This writing in the sunbeam, which BUNSEN and KIRCHOFF have now so far deciphered, promises, when further examined, to disclose other and more important secrets yet unknown. The method of analysis by the spectra of luminous vapours detects minute quantities of substances which entirely escape observation in the modes of analysis hitherto adopted. Two new metals have thus been discovered in the waters of Baden-Baden, though present in quantities so small that from several tons of the water only a few grains can be extracted. The all-pervading presence of soda in the atmosphere has also been ascertained by spectrum analysis, which is so sensitive that the hundred-millionth part of a grain becomes a very appreciable quantity. With this searching means of investigation placed at the command of scientific enquirers, we may expect the revelation of wonders surpassing that of THE ANALYSIS OF THE SUN.

THE HETTON COLLIERY EXPLOSION.

At the Manchester Geological Society meeting a very valuable paper upon "The Hetton Colliery Explosion," was read by Mr. J. DICKINSON the Government Inspector of Mines. At the time of the accident all connected with the colliery believed that it was one of the underground boilers that had exploded, for such a thing as gas had not been seen for months, nor the slightest indication of it. The indications, however, showed clearly that the explosion had first come from within the flues. The arches of these inner flues were blown up and burst out. The boiler was scarcely moved, and not at all damaged. There were signs of flame about the boiler and on the felt coating of some of the steam-pipes; but, with that exception, there was no trace of flame left upon the timber, upon the coal, or anywhere. Neither would they have been able to ascertain that the fire had travelled so far as the stables on the north side, nearly 400 yards, had it not been for the fact of their being set on fire. Mr. Dickinson thought he never saw an accident more closely, carefully, and patiently sifted. At the outset of the enquiry, on seeing the damage done, he and others also, as he is told, supposed an explosion of gunpowder or fire-damp would be found to have taken place in the workings, besides the explosion in and from the flue; and, at the beginning of the inquest, some of the jury said audibly they never would believe that this explosion happened from a boiler-flue. However, the enquiry went on, and after the most careful sifting they could give it, fact after fact stood out until it was impossible to resist the conclusion unanimously arrived at by the jury, that it had arisen from gas in the flue, and not from the workings, nor from gunpowder.

In the discussion which followed, Mr. Booth remarked that Mr. Dickinson said that probably the water flowing from the upcast might have something to do with the explosion, but that he did not give them his opinion. Mr. Dickinson had rather purposely left that open. He saw in the room one or two chemists of European reputation, and thought possibly they might have something to suggest on the matter. The water could not get to the boiler-flue. If this explosion was caused by 3000 cubic feet of explosive mixture, it has been of a more explosive nature than fire-damp. He believed that there were more than 3000 cubic feet of explosive mixture. Mr. Roscoe, F.C.S., said that it would be presumptous in him to offer an opinion, as that was the first time he had heard of the explosion. Mr. Spence considered that, supposing at the time the fire was banked up with fresh coals there was a large quantity of red fire, with a very limited supply of air, the heat would be sufficient to carry on the distillation of the coal, and the very small quantity of air which was coming in would be sufficient to convert the results of the combustion of the lower part of the fire into carbonic oxide gas. The result would be the distillates of the coal, chiefly hydro-carbons and carbonic oxides, all highly combustible. This might go on for a certain time till the heat would get down, and probably allow sufficient air to pass to carry the combustion right through, and the flame would come in contact with the contents of the flue. The flue being old, and its draught checked, would probably allow percolation of air into itself from the roadway. This explanation Dr. Crace-Calvert, F.R.S., thought gave the best insight into the origin of the explosion. It was very likely that oxide of carbon would, for want of sufficient air, be generated under the circumstances narrated. Messrs. Longridge, Dickinson, Binney, and A. Knowles also took part in the discussion, the result of which was the conclusion that the best means of preventing the recurrence of such an accident was to secure perfect combustion of the gases as generated; and, in damping down for the night, not to bank the coal so high as to prevent a current of air between the fuel and the boiler bottom, the furnace-door being left wide open.

THE RISCA EXPLOSION.—Concerning the ventilation at the Risca Colliery and Mr. Struvé's mechanical ventilator, Mr. Edw. Sinclair, of Western Hill, Durham, replies to Mr. Struvé's statement that "if a furnace were substituted for the machine the pit would stop, and that if a furnace were placed to assist the ventilation, the result would, in his opinion, be that every one in the pit would be stifled," by declaring that his conviction, derived from long experience as a colliery viewer and mining engineer, is diametrically opposed to that of Mr. Struvé. Mr. Sinclair understands from the evidence that there is an unoccupied shaft at Risca, which might be used for a furnace up-cast shaft, and he has no hesitation in saying that if the area of this shaft, and the area of the one on which Mr. Struvé's machine is applied, and all other circumstances connected with the ventilation of the colliery are equal with respect to the two pits, instead of the men being stifled, the furnace shaft will produce a better ventilation than Mr. Struvé's machine.

THE WORSLEY EXPLOSION.—The inquest upon the bodies of the nine men killed by the explosion at the New Linnyshaw Pit, was held on Saturday, the result being a verdict that the deceased died from an explosion; the cause of which there is no evidence to show. Safety-lamps seem to have been supplied to all, but in certain positions naked lights were permitted when the place had been tried and found free from damp, and blasting was likewise practised in some parts of the mine. The probable cause of the explosion appears to be that gas had been found hanging in the top of a level, which the inspector of the pit ordered to be removed by bratticing when the men were out, and that Latchford, the fireman, to whom the order was given, attempted to put up the sheet while the men were in, and the damp was by this means driven to the face, and fired at the colliers' lights—the fireman, however, being amongst the killed, leaves the question in uncertainty. Mr. Joseph Dickinson, the Government Inspector, visited the pit, and in his evidence before the coroner he said:—"I am of opinion that the gas was first fired near the face of the east level, there being things blown outwards from that point which I should not have expected to find so blown had the explosion been inwards. I think that Latchford's putting up the sheet in the second air end, would drive the gas out of the top air end; or even his body, in a small place like the air end where he was, might have that effect. The air end, which the gas would have to go along to get to the far end of the level is a very small place, and would not afford much opportunity of mixing the gas with the air; and Peter Hope's place being stagnant—that is, some 30 yds. beyond where the air-current was conveyed—would, with the large quantity of gas which is ordinarily generated there, be brought to the explosive point; and the train of gas along the air end would serve to communicate the fire to the ends where Mr. Jones discovered the gas. At the west side of the pit I saw no indication of explosion. I think that the ventilation has broken down from there not being a brattice cloth at the place spoken of; and secondly, that the ventilation has been run so close, that had it not broken down in this way, it would soon have broken down in some other. It is now a little more than 12 months since I was last in this pit, and upon that inspection I warned Mr. Fereday Smith, the principal agent, of this very thing, which I think has occurred. I did it by letter, and recommended that both the in-take and drawing-road should be made in-takes for air, and that the return road should be made larger. No improvement has been made. I told him that 'otherwise there was too little air when the workings became extended,' and they are now probably twice as long as they were then. All that has been done to carry this into effect has been the commencement of a double air end, and a tunnel, which has only been at work some six weeks. At the place where the ventilation from each pit meets the space was much too small. If they had acted on his advice he believed it might have been prevented." In cross examination, he swore that he did not consider the ventilation sufficient, and he thought that the officers of the pit should have been more diligent in looking after the gas, and not have allowed it to remain a week or a fortnight, as they had done.

VENTILATION OF MINES.—At the Institution of Engineers in Scotland, Mr. George Simpson read an interesting paper upon an improved apparatus for indicating the approach of the air in the mine to a dangerous state. He proposes to draw the air from the various points of the mine through small pipes to a testing chamber provided with the necessary apparatus for showing the specific gravity of the air. The testing apparatus is a closed chamber, with an inlet and outlet for the mixed gases of the mine. In this chamber there is a delicate balance, to one end of which is suspended a light sphere of considerable size, which displaces a given quantity of the gases. To the other end of the balance is suspended a hydrometer immersed in a vessel of water. The sphere and hydrometer are adjusted to exactly balance each other, when the chamber is filled with atmospheric air at a known temperature, and the index must then point to zero. Then if the chamber be filled with air from the mine, and this air contain hydrogen, the weight displaced by the sphere will be proportionably lessened, and the sphere will consequently descend until balanced by the portion of the hydrometer thereby raised out of the water. By this means the purity, or otherwise, of the gas will be ascertained. Prof. Rankine approved of this application of a sort of hydrometer to indicate the specific gravity of a mixture of gases.

SAFETY-LAMPS—MINERAL PITCH.—At the Manchester Geological Society, Mr. Dickinson, the Government Inspector, exhibited a new lock for safety-lamps, the invention of Mr. Holland: it was called "A Sealed Lock for Miners' Safety-Lamps." Mr. Holland had laid the matter before the Society of Arts and the Home Office, and the Home Secretary wished to know the opinions of the Inspectors of Mines upon it. He (Mr. Dickinson) had reported favourably upon it, and had said he would bring it before the members of this society. The lock appeared to be a strip of brass, with a kind of nut fitting into a socket, and could not be opened without breaking it. A new lock would have to be used every day. Of course, it was very desirable to have safety-lamps, but the principle of locking them ought to be strictly adhered to; and it mattered very little how simple the lock was, because a man who would willingly break open a lock, of whatever construction, would as soon break another rule, by carrying lucifer matches in his pocket.—Mr. LIVESEY thought the lock would be very effectual.—Mr. HIGSON intended to report favourably of the lock, and he quite agreed with Mr. Dickinson, that a simple lock should answer all purposes. He feared, however, if this lock had to be used lamps would sometimes be given out without them.—Mr. E. W. BINNEY (the Chairman) said too many lamps had been used in mines without any locks at all. If they had ordinary locks he did not think many of the colliers would attempt to pick them. There was a printed statement accompanying this lock, that the use of it would render explosions of coal mine gases almost impossible; and he thought it would have been better if that had been left out, because it was possible under some circumstances, such as in coal dust and the spilling of the oil, to explode the best safety-lamps.—Mr. LIVESEY thought no good safety-lamp would explode under ordinary circumstances.—Mr. DICKINSON said Mr. Binney's remarks were very proper, though he had never known, in his experience, an explosion of gas where the safety-lamps were in good order. At the Tyldesley explosion the lamps were in a disgraceful state. Yet the safety-lamp should never be made use of as a substitute for ventilation.—The CHAIRMAN: It would be a great curse if it were so. I think if there is much fire-damp the lamp should go out.—Mr. DICKINSON said there was no lamp used in Belgium that did not go out in that way. He (Mr. Dickinson) had seen in a Cornish mine a mineral pitch oozing out from the face of the coal; he was told it had been seen in Lancashire, but he had never met with it.—The CHAIRMAN had seen it in Derbyshire, and there were burning wells at Wigan, and in some parts of North Wales. In all parts of the world where this mineral pitch was found there was believed to be coal or bituminous shale.—Mr. HIGSON never saw it in Lancashire.—The CHAIRMAN said that Lancashire did not appear very favourable for it.—In reply to the CHAIRMAN, Mr. HIGSON stated the circumstances of the bursting of gas at Kirkless Hall, in August, 1859; and he attributed the safety of the men in the mine to the perfect ventilation and the use of safety-lamps. If one lamp had been defective every man must have perished.

REPORT FROM NORTHUMBERLAND AND DURHAM.

MARCH 7.—The Coal Trade continues, on the whole, to progress most satisfactorily here. On the Wear, generally, a large business is done, particularly at the Lambton and other large collieries in the vicinity. At the deep winning at Ryhope the output of coal is gradually increasing, and a number of additional cottages are in course of building. In Northumberland, the steam-coal trade has recovered from the late depression, and is now most active, and nearly all the new winnings lately made are doing extremely well; this is particularly the case at the most advanced port to the north of the steam-coal district proper—that is, at North Seaton; only a short time has elapsed since the coal was won here, and from 25 to 30 keels of coal per day are now worked, or from 525 to 630 tons of coal per day; and very shortly 40 keels of best coals, or 840 tons, are expected per day. The output of such a quantity as this cannot fail, even at the present moderate price, of proving highly remunerative; the capital, indeed, must be rapidly redeemed with such an enormous vend, as this will give no less than from 240,000 to 250,000 tons per annum. Some coal has been drawn out of the new shaft at Cowpen, and it is shortly expected to proceed vigorously; and at the Seaton Delaval new shaft about two keels of coal per day are raised, which will be rapidly increased. At this shaft a winding-engine of enormous power is erected, intended to lift a large quantity of coal per day; the drum in which the rope coils is, we believe, about 26 feet in diameter. At Bedlington new shaft they are proceeding very slowly, owing to the influx of water; but the engine is nearly finished, and when it is got to work it is fully expected that better progress will be made. At the new winning at Holywell, on the south part of the steam-coal field, a failure is reported, the ground being found to be hopelessly intersected with faults, so that little coal of good quality can be found, and the works are in consequence shortly to be relinquished. A slight explosion of gas occurred at the Backworth Colliery, on Monday morning. A deputy examined all the working places previous to the men going in, and found one bord contained a little gas. He informed the man, Williamson, who worked in this bord of the circumstance; but the man it appears went into it, notwithstanding, with a naked light, and an explosion immediately took place, by which he was severely burnt, and the stoppings in the vicinity were also blown out; no further damage was done.

At the Gateshead Police Court, E. Cope was charged with damaging a safety-lamp at the Heworth Colliery, on February 27. The deputy had ordered a man named Probert to work at a certain place, but when Probert reached the place he found Cope already there, and the latter refused to leave, on which a quarrel ensued, in the course of which Cope struck the other man with a pick on the arm, head, &c., and as he held his lamp in his hand the pick struck it also, making a hole, which had gas been present might have caused a serious explosion. The overman said that the condition of the pit was generally good, but the men were cautioned respecting the use of the lamp. He further stated, as the man Cope would have to leave their employment in consequence of his conduct, he hoped the Bench would consider such a part of the penalty. He was fined 1s., and 9s. 10d. costs.

Another meeting was held on Friday "On the Tyne Coal Drainage," at the Turf Hotel, Newcastle. The chair was occupied by Matthew Bell, of Woolsington. Mr. Anderson, solicitor to the undertaking, read the report of the sub-committee, dated March 1. He also submitted a list of the parties assenting to, or dissenting from, the scheme. Among the petitions was that of the Duke of Northumberland, who was represented to the amount of 352*l.* 3s. 6d. Summarised, the table showed actual assent to the amount of 2567*l.*; doubtful and neuter, 71*l.* 10s. 2d.; the sum represented by the petitions against the bill was 786*l.* There was likewise a sum of 183*l.*, which at present was the subject of negociation between the late Mr. Ellison's representative and the Ecclesiastical Commissioners, which was expected to be obtained, and was virtually arranged; that would increase the sum to 2750*l.* The amount required as taxation was 3560*l.* Mr. J. Clayton remarked, as a gratifying fact, that the Duke of Northumberland, although petitioning against the bill, approved of the system. He read the following passage from his petition:—"Your petitioner desires to have an efficient system of drainage of the Tyne coal basin carried out, if the same can be done efficiently, and with justice to the various parties concerned." Mr. Clayton congratulated the meeting on the little opposition that the bill had met with, but further remarked that it was very desirable that the bill should proceed without any opposition whatever; he, therefore, submitted to the meeting the following resolution:—"That application be made to the Committee of the House of Commons to postpone the proceedings in this bill until after the Easter recess, in the hope that in the meantime the parties still dissenting may be reconciled to the bill, and that it may pass without opposition." This resolution was passed, and the meeting separated. This difficult subject appears to be now in a fair way of being satisfactorily solved.

At the meeting of the Northern Institute of Mining Engineers, held on Thursday, Mr. Nicholas Wood, the President, occupied the chair. Several new members were elected, the total number of members now being 250. It was determined to hold a general meeting of the Institute in Birmingham on the 9th, 10th, and 11th of July next. That the members are to receive a circular to that effect, and asking them whether they contemplate preparing any papers, plans, or models for that special meeting, it being desirable that as many important topics as possible connected with the various branches of mining be introduced, and the fullest and most free discussion will be invited on all subjects and measures calculated to tend to the more general safety and economical workings of mines, especially with a view to the prevention of accidents by explosion, &c. It was also determined to memorialise the Home Secretary on the subject of a Mining College and District Schools, in connection with it and with the University of Durham. As the subject of the general management of the affairs of the University of Durham are now under the consideration of Parliament, the object of the memorial will be to induce the Government, if possible, to incorporate the proposed Mining College with the University in the new arrangement expected to be made. A paper was read by the President, Mr. Nicholas Wood, "On the Hetton Explosion." The paper embodies the evidence

given before the coroner at the inquest: a general description of the shafts, engines, and workings was also given, with explanatory plans and diagrams. As we have before given an abstract of the proceedings at the inquest, it is not necessary to repeat it here. A paper was also read by Mr. J. Daglish, of Hetton, "On Furnace Action." It is of a most valuable and elaborate kind, and in connection with the paper read at the last meeting on the same subject, by Mr. Armstrong, of Wingate, will form a very valuable essay on the subject of furnace ventilation, with also practical examples of their workings. Both papers are illustrated and explained by means of plans and diagrams.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

MARCH 7.—The Iron Trade of this district presents no indication of improvement, and it is hard to point out any circumstances which afford ground for anticipating any speedy change for the better. The news that the Morrill Import Duties Bill has passed the Senate at Washington leads to fears that this measure may become law. It is, however, still hoped that, on the consideration of the amendments in the Senate, sufficient time may be occupied to prevent the bill being passed this session, or, that if it finally goes up to the President for his sanction, Mr. Buchanan may refuse to give his assent to a measure which will tend, if passed, to widen the breach between the Northern and Southern States, and to encourage the border States, including the great agricultural States and the territories of the West, to cast in their lot with the Confederation, by which they may hope to secure the advantage of cheap manufactures. The passing of this measure would inflict a serious blow on the iron trade of this country. The duties on iron, hardwares, &c., would be almost prohibitory, and the extent of the trade which would thus be destroyed is very great. The United States last year took upwards of a third of the whole quantity of iron exported from this country, and the loss of even half this trade would be a most serious matter. But the effect will by no means end here. The States take nearly a third of our exported hardwares and cutlery, and two-thirds of the tin-plates. Beyond this, they take a very large proportion of all our staple manufactures, on which the prosperity of this country depends, and any serious diminution in the general exports to that country would be felt generally in diminishing the home demand for iron. It is said that if the measure should pass the new duties will not be levied on any goods which left this country prior to the 14th of April.

The Wolverhampton Chamber of Commerce has had under its consideration Lord Campbell's bill on Trade Marks. A committee presented a report on the subject, and pointed out many difficulties which must be encountered in carrying out the provisions of the bill. The Birmingham Chamber of Commerce proposes that all trade marks must be registered, but to this the report presented by the committee of the Wolverhampton Chamber offers many objections. It would be found in practice that unless the intent to defraud was very clearly made out there would be no chance of convictions.

The horse-nail makers' strike is gradually coming to an end. The absurd demands of the men have produced their natural effect, in leading the masters to invite others to learn the trade. The consequence is that men are gradually learning the business, and some of the men are going in to work. Never was there a more ill-timed and unreasonable strike.

The inquest on the two men killed at Messrs. Lloyd, Fosters, and Co.'s colliery, at Wednesbury, from a skip being allowed by the banksman to go over the edge of the shaft before the wagon was placed over its mouth, has terminated in the committal of the banksman, Charles Kent, for manslaughter.

The remarks in the House of Commons, on Friday evening, on the appointment of Mr. J. P. Baker as Inspector of Collieries in this district, have naturally excited some attention here. Whatever may be Mr. Baker's scientific attainments, the names read over by the Home Secretary of those who signed the memorial in favour of his appointment guarantee, if any names could, his fitness for the office. Mr. Hartley, the leading partner in the firm of G. B. Thorneycroft and Co., Mr. W. O. Foster, M.P., Mr. A. H. Sparrow, Chairman of the Bilston District Bank, and Mr. Philip Williams, Chairman of the Ironmasters' Association, and one of the directors of the London and North-Western Company, not to mention the other names, ought to afford a satisfactory guarantee of the efficiency of anyone whom they may recommend. Mr. Baker has, since his appointment, zealously performed his duties, and it is difficult to believe that there is any real foundation for the statement of Mr. Dillwyn—that the appointment has caused the expression of dissatisfaction in the district.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

MARCH 6.—The universal topic of discussion amongst everybody connected with or interested in the Iron Trade is the passing by the American Legislature of the Morrill Tariff Bill, the provisions of which impose upon all British made iron exported to America such prohibitive duties as to render the trade with America a dead letter. The measure is universally condemned, and will, if not repealed, prove very disastrous to the iron trade. The consequence is that the position of affairs, coupled with the tightness in monetary matters, is not very promising. The several departments of the iron trade are flat, with the exception of the railway branch, which is still active, and there are plenty of orders in hand. The increase in our railway system is a remarkable fact in our commercial history. There are between 9000 and 10,000 miles of railway in operation in the United Kingdom, 3000 additional miles in course of formation, and Parliament is now asked to sanction 3000 miles more of these iron roads. These facts conclusively bear out our observations made from time to time in these columns, of the generally active state of this department of trade.

Nearly the whole of the thousands of operatives in Lancashire who were out on strike have returned to their work, and the mills are now in full operation. The position of the Yorkshire collier is not so encouraging as to lead to the belief that the diputes will be amicably settled. An effort should be made to avoid another lock-out, the last one having proved sufficiently disastrous, not only to the men and to the masters, but to the different railway companies whose mineral traffic was greatly lessened thereby. The directors of the South Yorkshire, and the Manchester, Sheffield, and Lincolnshire lines, are preparing fresh arrangements, with a view to facilitate the transit of coal to the principal towns on their lines, on the faith that the Legislature will sanction the amalgamation. It has been whispered that the Great Northern would oppose them, which does not appear unlikely, judging from the personal opposition which the Chairman, Mr. Denison, offered at the meeting of the South Yorkshire shareholders. The nature of the amalgamation is such that it cannot fail to prove of the greatest advantage to both companies, as well as to the coalmasters of the district, whom the Great Northern has not latterly shown an anxiety to serve.

A very warm agitation has been going on in the Harrogate district of the West Riding of Yorkshire on account of 13s. 6d. being charged per ton for coal. The North-Eastern Railway Company allege that the high rate of coal is the result of the high charges of the coalmasters, whilst other parties state that it is owing to the high charges of the railway company. There have been several public and private meetings on the subject; and Mr. Oxlade, of York, stated that he had taken proceedings in the Court of Appeal to declare the company common carriers, which he contended would have the effect of reducing the price from 2s. 6d. to 3s. per ton. The increased production of coal in the Derbyshire collieries during the past three months has been calculated to be one-sixth greater than in any similar period; and, as the new railway extensions now in progress will afford an exit for coal in several undeveloped coal fields in the county, the production must be considerably increased. The Midland Railway directors are pushing forward the works with great vigour, and the lines bid fair to be out of the hands of the contractors within the specified time.

The Derbyshire lead mines are, on the whole, making satisfactory progress. The Eyam Company have declared a dividend of 10s. per share, besides leaving over about 700*l*. The Mill Dam Company have recently had a good sale of ore, and the mine is looking promising. The Mill Town Company at Ashover have sunk through the toadstone, and there is a prospect of their getting into good work again. A special general meeting of shareholders has been held to consider the propriety of closing the old mine. It appeared that since the directors had come to the determination to call the shareholders together the miners had opened into much better work, and, consequently, it was deemed advisable not to close the old mine at present; but, at the same time, the directors were empowered to do so when they should consider it advisable. It was stated that the capital of the company would not allow of both the old and new mines being worked together. The North Derbyshire Company are continuing their sinking operations at present. The time will soon elapse for the payment of the arrears of call, and we understand that the committee intend to take proceedings against those shareholders in arrear, and either compel them to pay up or forfeit their shares. Nothing tends so much to depreciate the value of a mining property as the apathy of the shareholders in meeting the demands made upon them.

The inquest on the bodies of the six men who were killed by the fall of the railway tunnel at Sheffield has resulted in a verdict of "Accidental Death," accompanied by a censure upon the builder and architect of the adjoining property for having removed the earth so near its foundations. We hear that the Midland Company intend to sue them for damages, and certainly the verdict of the jury will help them towards that end.

The local share markets have been steady, and there has been a good business done in railway, bank, and other stocks. The quotations of many of the mines are merely nominal.

REPORT FROM MONMOUTH AND SOUTH WALES.

MARCH 7.—The general state of trade has undergone little or no variation during the past week, and any remarks upon either branch at present, in addition to those in the last report, would be superfluous. One or two circumstances in connection with some of the principal works, however, may be mentioned, as showing how unsatisfactory things are in the iron department. The Cyfarthfa lease is stated not to have been settled, notwithstanding the supposed arrangement, and the rejoicings which took place consequent thereon, some months since. "Worse still," adds a local journal, in giving currency to the fact, "Mr. Crawshay has written to the agents of the opposite party, informing them that, owing to the dilatoriness of the settlement, and the annoyances he has been subjected to, he shall cease to negociate altogether." As to the Penydarren works, the negociations are understood to have resulted in failure; while there appears no indication whatever of anything being done at Hirwain. The iron exported from Cardiff during the week shows a large increase upon that of the preceding similar period, and comprised—For Naples, 201 tons of bar and bundle, by the Plymouth Company; for Bilbon, 308 tons rails and 8 tons axles, by the Aberdare Company; for Palermo, 161 tons bar and bundle, by the Llanny Company; for Bahia, 602 tons rails, by the Aberdare Company; for New York, 1534 tons rails, by W. Crawshay, and 500 tons rails, by the Aberdare Company; for St. Sebastian, 161 tons rails, by the Aberdare Company; for Barcelona, 385 tons of rails, by the Rhymney Company. From Swansea, the exports were nearly 10,500 tons of coal and patent fuel. Among the arrivals were 75 tons copper ore, from Rouen, to order; and from Caldera, for Bath and Son, 475 tons copper regulus, 380 tons silver ore, and 608 bags of silver and copper regulus. Freights improve, though to a very small extent. For Spain, enquiries are numerous. At Newport, trade is rather slack. Freights for coal maintain their figure, notwithstanding that there is a paucity of orders. Of iron the quotations are merely nominal.

A meeting of colliery proprietors has been held at Llanelly, with reference to the new Mines Regulation and Inspection Act. Mr. Thomas Evans, the Government Inspector for South Wales, was in attendance. The various provisions of the measure were carefully commented upon, and their effects discussed. The proceedings occupied several hours, rules being ultimately agreed upon in conformity with the requirements of the Legislature.

An inquest was held on Tuesday touching the death of a lad 15 years of age, who was killed at Ystalyfera Iron-works. He was standing near the rolls, talking to some boys on the opposite side, and shortly after, no one having noticed by what means he got there, he was observed drawn between the coupling boxes. Before the poor lad could be extricated his body was mangled in a most frightful manner; indeed, hewn to pieces. The lad's duty was to wheel iron from the furnaces to the hammer, and it is supposed that by some means his clothes got entangled with and he was drawn into the machinery. A verdict according with this was returned.—On Monday an inquest was held at Blaina upon the body of David Wilkins, aged 26. On the 21st ult., while at work in the Three Quarter Pit, he was burnt by a slight explosion of fire-damp, but not so seriously as to apprehend a fatal termination. Inflammation, however, supervened, and he died on Saturday. The jury returned a verdict of "Accidental Death."

At the Pembrokeshire Assizes, last week, a special jury case connected with the mining interest was heard before Mr. Justice Byles—Treloar and Another *v.* Taylor. From the facts brought forward, it appeared that the defendant in the action was Mr. Taylor, a gentleman of some importance, and a partner and active manager of the Lisburne Mines, in the county of Cardigan, the plaintiffs being two workmen, who some time since were employed in them. Under certain agreements, the plaintiffs in September, October, and December, 1859, took the same pitch in the mines. Upon the last occasion Captain Tyrrel put the bargains up to auction, Capt. Eddy, who had been taken ill, having previously arranged with the plaintiffs. It was considered rather a dangerous place, and on the 24th of December a piece of rock fell, crushing the leg of Morgan, Treloar's partner. The men left the mine, and it being Christmas time did not return until the 27th, when they discovered that a very large quantity of ore, upwards of 30 tons, had fallen, a circumstance greatly in their favour. They went on working until the 27th of January, when they were informed by Capt. Tyrrel that Capt. Eddy had told him they were working out of their boundary, and must discontinue, as they had forfeited their bargain. For the plaintiffs it was contended that they had not gone beyond their limits, and that they ought to have been permitted to, at least, remove the ore then down, which from the fall mentioned and their labour made altogether 43 tons. Upon that they were entitled to be paid 6*l*. per ton, subject to the ordinary deductions. The defendant's counsel observed, that the parties for whom he had the honour of appearing regretted taking up the time of the Court in the decision of the case. They had conducted mining operations in Cardiganshire for a long time, and although during the last 30 years they had expended in working these mines no less than half a million of money, this was the first action brought against them. Unfortunately, Capt. Eddy, was dead, or very possibly the action would never have be brought. He argued that the limits of the letting did not include the ground where the mineral in question lay, and suggested that the plaintiffs, having noticed the fall of ore in the level, were tempted to take the pitch they had contracted for, to take advantage of the more profitable work. The book of letting was put in, and a mass of evidence adduced, the trial occupying a portion of Tuesday and the whole of Wednesday. A verdict for the defendant was returned, but the jury stated that they had no evidence of the working being wilful.

THE MINERAL DISTRICT OF LAKE SUPERIOR.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The great development and production of the mines of Lake Superior (iron, copper, and native silver) have induced the directors of the Ontonagon Mining District Association to send an agent to Europe, with the mission to give to those who take an interest in the mines correct and exact information about this mineral district; to make the European capitalists well acquainted with our mines, their productions, cost of working, dividends, organisations, bye-laws, the number and value of their shares, &c. Having been selected by the Association to act as general agent in Europe, I ask you the favour to publish in your valuable Journal a series of articles, which will familiarise your readers with the early history and present position of that wonderful country.

FRANCIS A. ARTAULT,
Agent of the Ontonagon Mining District Association.

EARLY HISTORY OF THE COPPER MINES OF LAKE SUPERIOR.

SIR,—The copper mines of Lake Superior are situated in the territory known as the Upper Peninsula of Michigan. This peninsula is bounded on the north by the Lake Superior; on the east by the River St. Mary; on the south by the Lake Huron, the Straits of Mackinac, and Lake Michigan; and on the west by the boundary line between the States of Michigan and Wisconsin, which runs from the mouth of the Menominée River, on Green Bay, in a north-westerly direction to the mouth of Montreal River, on Lake Superior. Its greatest length is about 300 miles; its average width is about 120 miles. When the French Jesuits first visited this country, as early as 1640, they discovered its rich mineral resources, and reported the fact to the head of their order in Paris; and at their mission at the Saut St. Marie, where the French built a fort and a chapel in the year 1688, bracelets for the Indians, as well as candlesticks, crosses, and censors were wrought for the use of the church by a Jesuit brother (goldsmith by trade) from the masses of pure copper and native silver found on the south shore of Lake Superior. As early as 1772, Mr. Norburg, a Russian, who accompanied Henry, the English trader, in a part of his expedition, found upon the shores of Lake Superior a mass of silver embedded in other ore, which produced the pure metal in the proportion of 60 per cent. This mass was contained in a fragment of 8 lbs. weight. The silver was carried to England, and deposited in the British Museum (consult Henry's "Travels," and also Carver). In 1773 a more important project was commenced, for the purpose of working the copper mines of Lake Superior. For that object a charter was granted in England to a company, the partners of which consisted of the Duke of Gloucester, Mr. Secretary Townsend, Sir Samuel Tutchet, Bart., Mr. Baxter (Consul to the Empress of Russia), Mr. Cruikshank, Sir William Johnson, Bart., Mr. Bostwick, and Alexander Henry, the Indian trader. A sloop was purchased, and the miners commenced operations, and blasted 30 feet into the solid rock." It was soon found, however, that the expenses of blasting and of exportation would not warrant the enterprise, and the sloop being sold, and the miners discharged, it was soon relinquished. Soon after the conquest of Canada, a company of adventurers from England commenced excavating the copper and transporting it; but that project was also given up, on account of the disturbed state of affairs in America.

Dr. Benjamin Franklin, in 1783, when he was negociating the Treaty of Peace with the British Government, insisted that the line which was to divide the British from the American possessions on the north should run to the north of Isle Royale, on Lake Superior, for the purpose of securing the rich deposits of copper that were known to exist in that island. General Cass, in the year 1819, under the authority of the Secretary of War, directed an exploring expedition, which passed along the southern shore of Lake Superior, in the Upper Peninsula, where he discovered that celebrated mass of native copper (weighing about 3 tons) which is now in the Patent Office at Washington. This mass of copper had been detached from its native hill, and transported several miles from it to the bank of the Ontonagon River, with the evident intention of taking it down that stream to the lake. By what race of men this mass was removed from its native bed and carried to where General Cass discovered it will, probably, never be known. There are traces of these ancient miners throughout the whole mineral range of Lake Superior. Mining pits or excavations in the copper-bearing rock are so extensive and distinct that, after removing the soil and debris which fill them, the modern miner, without any geological knowledge whatever, has no difficulty in tracing the copper veins from one end of the country to the other. That it is three or four centuries since these people made the excavations does not seem to admit of a doubt, for trees whose ages can be calculated for that length of time have been found growing within the excavations referred to. Copper chisels and spears in great variety and abundance have been taken from underneath the roots of these huge trees. Who the people were, and who worked these mines at that early date, whence they came, or whither they went, will probably never be known by us moderns. That they were infinitely much further advanced in civilisation than the North American Indians of our day does not admit of a doubt. If the Jesuit missionaries of 1640 failed to learn anything respecting them, we of this day must content ourselves to remain in ignorance.

In 1835, when the people of the then territory of Michigan applied to the Congress of the United States to be admitted as a state into the Union, the Upper Peninsula of Michigan was denounced as an American Siberia,—a land of eternal ice and snow, entirely uninhabitable. This was the cry of the masses. A few of the citizens of Michigan were willing to admit that some specimens of copper had been seen there, but no one dreamt that it would ever amount to anything as a mineral region. As soon as the Indian title to this country was extinguished, in 1843, the United States Government established a military post on Keweenaw Point, known as Fort Wilkins. The usual number of citizens, *attachées*, and hangers-on accompanied the troops in the fort. These adventurers were not long in discovering the extensive existence of native copper in the rocky hills in its vicinity.

In 1844 the State Government of Michigan commenced a systematic geological survey of the country. This was prosecuted with vigour until the death of the lamented Dr. Douglass Houghton, State Geologist of Michigan (whose melancholy death by drowning occurred on the night of Oct. 13, 1847). Dr. Douglass Houghton was a man of indomitable energy and perseverance, and fervently devoted to the cause of science; had he lived to complete this great work he would have erected an enduring monument to perpetuate his name. He died in the discharge of his duty, prematurely for the cause of science and for his own fame. That partial geological examination showed that a portion of the country from Keweenaw Point to the Porcupine Mountains was well filled with native copper; that a belt of copper-bearing rock, about three miles in width, and from three to twelve miles inland, which is nearly 100 miles in length, contained more or less copper. Unfortunately, a wild rush of speculation filled the country with adventurers in 1846, 1847, and 1848. Most of those persons knew no more about mining for copper than children; and the consequence was that Lake Superior copper was denounced as a humbug, for the simple reason that they had neither experience nor the necessary capital to open the mines. In two instances, however, men of experience took hold with a will, and furnished the capital; and a number of gentlemen from New York and Pittsburg embarked in the real business of mining. They organised two companies as early as 1848, known as the Cliff and the Minesota Companies; the one near Keweenaw Point, and the other on the Ontonagon River, in the Ontonagon county. The Cliff Company invested $105,000 in labour and machinery to develope their mine; but this sum was only sufficient to make a beginning, and had it not been for the exceeding productiveness of the mine their operations would have been a total failure, for it was not until they had expended $395,000, in addition to their original investment (which latter sum, however, was derived from the products of the mine), that they were enabled to pay their shareholders a first dividend. Since 1851, until now, this mine has paid $1,500,000 in dividends to the stockholders. The owners of the Minesota Mine only invested $60,000 to commence their operations; and, like their neighbours of the Cliff Mine, they too would have failed had not the mine come to their rescue immediately after they opened the ground. They also expended $427,000, in addition to their original investment, before they were enabled to pay themselves anything from the products of the mine. It is believed that so rich a mineral region does not exist anywhere else—a district which furnishes its own capital to develope itself. Give the Lake Superior copper region the amount of capital that mining operations require in other countries, and these mines will produce more copper per annum than the mines of Europe. The copper is there; all that is wanted is the capital to erect machinery and pay labour to take it out. When ingot copper can be made and put on board of vessels on Lake Superior at 14 c. per lb., when the cost of freight to New York or Boston shall not exceed ½ c. per lb., and when that same ingot copper sells on an average at 21 c. per lb., we maintain that capital and labour run but little risk of not being amply rewarded for their expenditure. These are facts. Only furnish us with the means to open the mines and erect the machinery, and we will carry out faithfully the above hypothesis.

Notwithstanding that country has sent to market 8500 tons of minerals, which will produce near 7000 tons of ingot copper, within the past year, it is equally true to say that the development of the Lake Superior mining district is in its infancy yet, and the work has but scarcely begun. The whole mineral belt above mentioned is literally filled, as far as it has been examined (and that examination has extended for many miles on the range), with native copper. Up to within the past five years navigation to Lake Superior was obstructed by the Falls of the St. Marie River, so that every article of necessity or luxury had to be unladen at that point, and transported around the Falls at a very great cost. Small boats only, such as could be hauled around the Falls, were the extent of the means of navigation on Lake Superior. The necessarily extravagant freight charges to the mines in any other country less productive would have amounted to a prohibition of all kind of business. When the Saut St. Marie Canal was completed, in 1855, mining operations and business generally leaped, as it were, into real life. The largest class of our lake steamers were enabled to go direct to the mines; the freight and passenger traffic were at once opened to the competition of all; and the usual prices of our lake country were all that could be obtained for this service. New mines were opened; the older ones were worked more extensively; and the product of copper, which in 1854 had not reached 2000 tons per annum, has increased so that the aggregate shipments of 1860 will somewhat exceed 7000 tons of ingot copper. All this has been done with the moiety of capital proportionately in every instance, as noticed in the commencement of this article. Let the European capitalists, mining men, and metallurgists, who are often dabbling in uncertain stocks, visit the Lake Superior mining region and examine for themselves, and they need have no fear of getting large dividends on their investments, with a certainty that there will be no failure in the supply of the pure native raw material, already smelted to hand for them in Nature's great volcanic furnaces, in our Upper Peninsula of Michigan.

FRANCIS A. ARTAULT,
Agent of the Ontonagon Mining District Association.

22, Rue des Fossés, St. Bernard, Paris (pro tem.), Feb. 27.

NICKEL AND COPPER MINING IN PENNSYLVANIA, U.S.

GAP MINES, LANCASTER COUNTY.

SIR,—Having lately had occasion to visit the Gap Mines, in Lancaster county, Pennsylvania, I beg to hand you a continuation of the history of its progress. I visited this concern some three years ago, when I furnished you with its history up to that date, which report will be found embraced in Prof. Rogers's "Geological Report of Pennsylvania" (see Appendix). When I last visited this mine preparations were being made for the energetic working of the concern. But on my recent visit I was astonished to find this very promising property still undeveloped; only 27 ft. more had been sunk in the engine-shaft, which makes its entire depth 165 ft. At the bottom the lode changes from vertical to diagonal; and in the bend, as might have been expected, it becomes poor for nickel, the matrix being changed from hornblende to a chloritic slate and quartz rock. There has a lead of copper ores accompanied the nickel on the north side down to this point, which has produced about 290 tons. It is now changed over to the south side, or footwall, of the lode, where it promises to concentrate into a regular vein of copper ores; and when this lode becomes established in its downward course, it is not improbable that it will justify the opinions of almost all scientific men who have visited the mine,—"That it will become a rich copper mine in depth."

The developments made since my first visit are simply the sinking of the engine-shaft 27 ft.; the extension of a 137 ft. level south-west (this being the direction of the lode) about 150 feet; and the sinking of an air-shaft down on it, 120 feet south-west of the engine-shaft; also, a cross-cut north 150 ft. The latter discovered a metalliferous rock about 90 ft. from the main lode, which was not at first recognised as the north lode (of which mention was made in my former report); but subsequent exploration proves it to be that lode, disturbed by a vein of calcite running across it obliquely. After extending on its direction 60 ft. south-west the calcite leaves the lode, where the latter begins to yield good stones of nickel ores, and will probably soon become productive. The 137 ft. level, now about 220 ft. south-west of the engine-shaft, appears to have passed beyond the large deposit of ores found at and near that shaft; and the prospects at the present end indicate that it is entering on another deposit, which has been struck in a shaft called Udy's shaft, 340 ft. south-west of the engine-shaft, at the depth of 50 ft., beyond which there are no further explorations made on this lode.

The amount of ores extracted from these operations hitherto has been:—Sulphuret of nickel, 8220 tons; copper ores, 290 tons; sulphur ores, 145 tons = 8655 tons, which, I am informed, has realised the sum of $135,700.

The productive ground laid open on this lode consists of a back, extending from the cross-course to within a few fathoms of the 137 ft. level end, being about 250 ft. long and 70 ft. deep, estimated to contain from 8000 to 9000 tons of ore, which, when dressed, will yield about 3 per cent. of metallic nickel. The 137 ft. level is now in favourable ground for driving south-west; and its being near to another run or deposit of ore, it would be very desirable to see this end pushed forward, to prove the ground in this direction, which looks more favourable for the production of rich ores than it did at any other point. There is a stope of ores in the bottom of this level (south-west of engine-shaft), which produces about the same as the backs, until it reaches the bend in the lode, and the level in driving has produced good stones of copper ore near the bottom, the backs being chiefly a course of rich nickel ore.

The north lode, situated about 120 ft. north of the foregoing lode, of which but little notice has been hitherto taken, on account of the abundance of ores found in the main lode, has latterly become exceedingly interesting; a shaft having been opened on it about 500 ft. west of the engine-shaft, on an outcrop of gossan, revealing a strong lode of nickeliferous pyrites about 14 ft. wide. In October, 1859, Prof. C. U. Shepard visited the mine, and in examining these pyrites found considerable native nickel, or millerite, between the beds and in the fissures of this lode. The discovery of a water-course in the cross-cut at the engine-shaft subsequently let off the water from this shaft to the depth of 40 ft., where the native nickel occurs very abundant, and the ores changed from porous or cellular to a more compact form, and its yield suddenly increased from 1 90-100 to 4 per cent., independent of the native nickel (this native nickel occurs in solid plates, mostly between the joints of pyrites). The extension of a 40 ft. level proved the surrounding rock to be elvan; and there being an outcrop of decomposed granite contiguous to this shaft (now called Millerite shaft) shows that the whole formation in this part of the property is plutonic. The strong outcrop of gossan, the power of the lode, the quantity of native nickel contained in it, and the great improvement of the ores at so small a depth, conspire to impress me with a very favourable opinion of this part of the mine, especially as it is in elvan rock, which is a formation very favourable for rich mineral deposits. The prospects presented by this opening show the lode to be capable of producing large returns; at the present depth 50 tons per week would not be too much to expect, and after it is opened properly several hundred tons per month may be produced, the expense of raising which cannot exceed $7 per ton, including every expense incident thereto. In connection with this, 200 tons per month might be produced from the main lode, which can be raised and dressed at the same rate per ton.

A smelting-works was erected within about half a mile of the mine in 1856-57, for the concentration of these ores into speiss or regulus, known here as "nickel matte." These works, which are of too small a capacity to be conducted with economy, were no sooner erected than the proprietors failed, under the pressure of the financial crisis of 1857. It has subsequently passed into the hands of two other parties, whose financial condition was not much improved by their metallurgical experience; it ultimately fell into the hands of the mining company. These obstructions in the smelting department appear to have been the chief cause of the tardiness of the mining company in developing the mine. At first there was a slow market for the produce, so that the company hesitated to go into the smelting business without a knowledge of it, or the refining of the metal, particularly as the capital authorised by their charter was not sufficient, nor did the charter permit the company to go into a manufacturing business. Within the last two years an increased demand has opened up for "nickel matte," most of which is shipped to England. The quality of the mineral is said to be very good. I understand it is sought for in the German market, where shipments are sometimes made.

In taking a review of this important property,—the magnitude of the lodes, their strength of character, with the very favourable geological features of the district, coupled with local advantages for the development of the mine in a mining-like manner,—there appears to be a certainty of its becoming a profitable and an extensive mine, when worked with such spirit and energy as its prospects demand.

JOSEPH BUZZO.

Conestoga, Pennsylvania, Feb. 7.

FOREIGN MINES.

MARIQUITA AND NEW GRANADA.—The following advices have been received by the Mariquita Company:—Extract from Santa Maria letter, dated Jan. 29:—"No communication received from the interior of the country for some time. No warlike stores (powder) allowed to go up the River Magdalena." Extract from Cartagena, dated Feb. 4:—"Since our last there has been no change in the political state of the country, consequently no further remittances have been received."

NEW GRAND DUCHY OF BADEN.—S. Richards, Munsterthal, March 4: At Schindler Mine engine-shaft the 54, by the side of the lode, is extended 6 fm. 5 feet. The end is now in so far as the porous part of the lode, and we have broken a small place into it, through which the water is fast draining down, and has prevented operations for a short time in this level; it will, however, be soon all out, and the level left dry, so that better progress than before will be made here. The cross-cut in the lode behind the end has not been advanced since last report; the men before they were hindered by the water just referred to, had been enlarging the end for advantage in getting forward, and there is, therefore, no alteration there to notice. In the same level south, now extended 5 fms. 2 ft., the wall of the lode is reached, and a small hole broken into it, where solid lead ore shows itself. The 44 north is extended from the shaft 43 fms. 1 ft. The whole of the end is still lode, and leaving lode also in both sides; a large proportion is quartz and fluor-spar, with mundic, and lead scattered throughout, worth for the size of the end (4 feet) about 5*l*. per fathom. The same level south is extended 20 fms. 0 ft. 3 in.; the lode is 2 ft. wide, worth 8*l*. per fathom. The part of the lode going back into the east side has been cut into 2 ft. by 9 ft. long, but not through; so far it is worth at the rate of 7*l*. per fathom. The stope in the back of this level is worth 8*l*. per fathom. The stopes in the back of this level, north of the shaft, are worth on the average 8*l*. per fm. The 34 north is extended 63 fms. 5 ft. 9 in.: 1 ft. of the lode is carrying with the end, which is producing at present a little saving work, but not enough to value. The cross-cut behind the end since last report has been advanced 2 feet in fluor-spar, intermixed with mundic and fine lead ore, making together 9 ft. into the lode, but not yet through. The same level south is extended 41 fms. 1 ft., the lode is 1½ ft. wide, and worth 7*l*. per fathom. The stope in the back of this level is worth 8*l*. per fathom.

LUSITANIAN.—Feb. 25: Palhal Mine—Basto's Lode: The lode in Taylor's shaft, below the 50, is 6 ft. wide, composed of quartz, and a branch of copper ore, worth 4 tons per fm. The lode in Jackson's winze, below the 38, is worth 1 ton per fm. The lode in the 50, east of Taylor's shaft, is 2 ft. wide, and is unproductive. The lode in the 50, west of Taylor's engine-shaft, is 1 ft. wide, composed of quartz and flookan. The lode in the 38, west of Taylor's shaft, is worth 2 tons per fm. The lode in the 50, west of the River shaft, is 2½ ft. wide, composed of quartz and mundic. The lode in the 38, east of River shaft, is 2 ft. wide, unproductive. The lode in the 28, east of the same shaft, is 4 ft. wide, composed of quartz, mundic, and stones of ore. The lode in the 18, in the same direction, is 3 ft. wide, composed of quartz, flookan, and a string of laminated black copper ore, but not sufficient to value. The lode in the 8, east of the same shaft, is split into several branches, some of which are producing small stones of lead. The lode in the adit level, east of Pinto's shaft, is without alteration. The lode in the adit west of Perez' whim-shaft, is 3 ft. wide, with a branch of ore in it worth 1 ton per fm. The lode in the stopes No. 1, in back of the 50, west of Ernesto's winze, is worth 1 ton per fm. The lode in the stopes No. 2, in bottom of the 28, east of Clondino's winze, is worth 1 ton per fm. The lode in the stopes No. 3, in bottom of the 38, east of Henrique's winze, is worth 1 ton per fm. The lode in the stopes No. 4, in bottom of the 20, west of Clondino's winze, is worth 1 ton per fm. The lode in the stopes No. 5, in back of the 38, east of Clondino's winze, is worth 2 tons per fm. The lode in the stopes No. 6, in back of the 8, east of Joze's winze, is producing saving work for lead. The lode in the stopes No. 7, in back of the 50, west of Taylor's shaft, is worth 2¼ tons per fm. The lode in the back of the adit, in the stopes No. 8, west of Perez' whim-shaft, is worth ¾ ton per fm. The lode in the stopes No. 9, in back of the 28, east of Fegereido's rise, is 4 ft. wide, composed of quartz and copper ore, and worth ½ ton of the latter per fm.—Mill Lode: The lode in the 38, west of the caunter lode, is 1½ ft. wide, composed of quartz and stones of copper ore. The lode in the 28, east of the slide lode, is 1 ft. wide, composed of flookan and small stones of lead. The lode in the 18, east of the caunter lode, is 4 ft. wide, with a branch of ore on the north side, worth 1 ton per fm. The lode in the stopes No. 10, in bottom of the 18, west of junction winze, is worth 1¼ ton per fm. The lode in the stopes No. 11, in back of the 18, east of Dea's winze, is worth 1 ton per fm. The lode in the stopes No. 12, in back of the 38, west of the caunter lode, is worth 1½ ton per fm.—Caunter Lode: The lode in the 50, west of Taylor's engine-shaft

is 6 in. wide, composed of quartz, spotted with copper ore and mundic. The lode in the 18, west of the Mill lode, is very small and poor.—Great Caunter Lode: The lode in the 20, west of Oak engine-shaft, is 1 ft. wide, composed of flookan and spots of lead. The lode in the 20, east of Oak engine-shaft, is 4 feet wide, impregnated with lead. The lode in the stopes No. 13, in back of the 20, west of Oak engine-shaft, is worth 1 ton per fathom.—Ponte Lode: The lode in the adit, west of the River Caima, is rather unsettled. —Slide Lode: The lode in the 28, west of the Mill lode, is 2 ft. wide, worth ⅗ ton per fm. The lode in the 20, west of Oak engine-shaft, is 1½ ft. wide, composed of quartz and spots of lead. The ground in the plat in the 40, at Oak engine-shaft, and also in the 30 cross-cut south, is rather hard. The ground in the 50 cross-cut, south of River shaft, is of a hard gneiss.—Carvalhal: The lode in the adit level, west of the River Caima, is 3½ ft. wide, composed of quartz and a branch of mundic. The lode in the costean pit, on the eastern hill, is 6 ft. wide, composed of quartz and spots of lead.

PONTGIBAUD.—W. H. Rickard, March 2: Roure: At Agnes' the whim-shaft is holed to the 40; we shall soon get the skip to hand from this level. The 40 south, on Agnes' lode, is not producing ore to value. The 20 south, on the same lode, is improved, worth ¾ ton per fm. for width of level, but there is more lode yet lying to the east of us. The stope on south is opening good tribute ground, and the level is easy for driving. Anna's shaft is hard, and rather spare for sinking; set at 250 fr. per metre, now down 12 metres below the 40. James's shaft is sunk through the lava, and is now in soft ground. Our stopes in this mines are looking very well. The tribute pitches, on the whole, are not quite as rich as last month, but are yielding fair quantities of ore.—Rosier: There is nothing new in our bargains here. The tribute is about the same as last month.—La Grange: The cross-cut west has intersected a vein, which has drained the ground, and rendered it more easy for driving through. We have resumed the driving of the adit cross-cut south by two men; the same level north is in a lode chiefly composed of quartz. The two stopes in the back of the adit are without alteration in value, still yielding large quantities of work.—Mioche: Taylor's engine-shaft is now down 19 metres below the 60, in hard spare ground. The 60 metre level, north of this shaft, on No. 3 lode, is improving, now laying open stoping ground; the same level north, on No. 2 lode, is producing a little saving work of low quality. The 40 cross-cut, west of No. 6 lode, has entered orey ground; we hope soon to cut the No. 7 lode. The 20, south of Taylor's shaft, on No. 3 lode, is in easy ground, producing a little ore that may be taken away on tribute. The adit, south of cross-cut, on No. 7 lode, holds good, worth full 1 ton of ore per fm.—Barbecot: No change in the 35, north of Leontine's shaft. The No. 1 lode in the adit cross-cut, north of Brot, is about 2 ft. wide, speedy for exploring, but poor. We have set a cross-cut behind this end to cut No. 3 lode, from which our tributers have broken some good ore in the level above during the last two months.—Franai: The 30, north or cross-cut, on Felix lode, is poor. We have set a winze to sink in the bottom of the adit on the tributers' branch, which is worth 2 tons of ore per fm.; we hope to cut this lode in the 8 metre level this month.—Argentelle: We have not yet cut the lode in the cross-cut. Our surface works during the past month have been carried on much more rapidly than during the preceding one. Our dressing has been pushed on with all possible dispatch, in order to make up for lost time, and I am glad to say we have succeeded in getting a good sampling—265 tons, dry weight, which—I assure you, gives us greater pleasure than anything else.

ENGLISH AND CANADIAN.—F. Bennetts, jun., Feb. 5: Morrison's adit level has been extended eastward during the past month 5 fms. 4 ft. 7 in.; the ground in the latter part of this distance has been easier for progress, but we have not yet met with any lode: re-let to six men, to drive for February, at $18 per fathom. The adit level north, on Sewell's lode, has been driven 1 fm. 2 ft., without change to notice; the lode has averaged about 4 ft. wide, composed principally of quartz, spotted with grey copper ore, towards the bottom of the level yielding some good stones of copper ore; this end is re-let to two men, to drive for February, at $72 per fathom. We have stoped in back of the adit level south, on Sewell's lode, during the past month 9 fms. 1 ft. 11 in., and obtained therefrom a pile of stuff that will yield when dressed about 3½ tons grey copper ore, worth 80*l*. The lode in the back is kindly but poor, and as the orey part of the lode appears to be going up in the south end of the stope, the men are engaged in stoping a short piece of ground in order to prove it. After this has been done it may be advisable to put up a rise in the back of the level.—Hall's Lode: During the month we stoped in the bottom of the adit level 6 fms. 5 ft. 10 in., and obtained therefrom 2½ tons of copper ore, worth about 60*l*. when dressed. This is re-set to four men for February, at $28 per fathom. The lode in the bottom is at present 15 inches wide, yielding about ⅛ ton of ore per fathom.—Campbell's Lode: We stoped in the back of the adit level in the past month 4 fms. 4 ft. 3 in. of ground, and obtained therefrom about 2 tons of copper ore, probable value 50*l*. We have set the north end of this stope to two men for February, at $22 per fathom. Kent's shaft has been sunk 2 fms. 5 ft. 6 in.; the ground still continues hard for sinking, but congenial for copper ore.—Dressing: in this department we have been employed getting the ore stuff broken for the month as far forward as the present severe weather will permit, so as to have the different piles of ore stuff in readiness as soon as we have sufficient water for washing purposes.

ON COAL, AND SOME OF ITS PRODUCTS.—No. II.

I will now say a few words about gas, which is, commercially speaking, of the most interest to you. My own opinion is that, sooner or later, coals will be distilled not so much for the gas they contain as for those matters which we now call *secondary products*.

Gas, as I have already told you, is generally produced by distilling coal at a high heat, but illuminating gas may be produced from anything that will burn with a flame in air. Wood, peat, bones, any dried vegetables, oils, and water, may all be decomposed, and one of the elements will be gas. Even the dried dung of animals not only makes gas, but actually is used for this purpose. In the North of Russia the bark of trees and wood are exclusively used for gas making by the various parties for whom I rect gas-works in that country.

Gas from water is easily made by passing its vapour through either red hot coke or charcoal, and as water is composed of oxygen and hydrogen, the coke or charcoal take up the former, and liberate the latter; but as artificial light is produced by the incandescence of carbon, the gas made from water requires to be carbonised, or impregnated with carbon, which can only be done artificially by a separate process, either by mixing it with a very rich gas, or by passing it through benzole or naphtha. Many attempts have been made to make gas in this way so as to answer commercially, but they have all signally failed, and are likely to do, so long as ordinary coal keeps under 60s. per ton, with coke at a proportionate value

Sir Humphry Davy, and more recently M. Gillard, a Frenchman, and others, have attempted to produce light by heating spongy platinum with hydrogen or water-gas; but, looking upon hydrogen simply as the fuel for heating such a mass, and bearing in mind that the particles of carbon in coal gas are so minute as not to be seen, it follows that it must take a deal more fuel to heat that which can be seen and felt than that which is so minute,—the same difference as between a needle and a thick bar of iron. Still it is possible to obtain light by platinum, as well as by many other round-about processes. Do they pay is the question; and can they compete successfully with gas made from coal? The city of Narbonne, in France, and Palma, in the Island of Majorca, were thus lighted, but they have been signal failures; and I can speak very feelingly on the subject, for I lost many hundred pounds over water gas directly, although indirectly I gained experience.

I have long ago come to the conclusion that there is nothing in this country that can compete with coal, be it liquid or solid, for gas making; for the elements required to make an illuminating gas exist in most coals in the exact proportions required—sufficient hydrogen to heat the carbon, and sufficient carbon to give the light.

Cannel coals yield the richest gas, but as the coke from the generality of them is of little value, and as people in this country will not pay a sufficiently high price for such rich gas, these coals are only used for mixing with inferior ones, so as to bring the gas up to the standard of illuminating power which Parliament may have imposed in all those towns where the gas companies have private Acts of their own.

But a great deal depends upon the way in which the gas is burnt to obtain the greatest illuminating power. A poor gas requires less air than a rich one. What might be just enough for the former would be totally inadequate for the latter, for it would smoke, and then many people would say, "What bad gas it is!"

Now, whenever you see ceilings black, or notice the gas to be smoking, do not come to this conclusion; but suggest to the consumer to have a new burner, adapted to the quality of the gas he may be burning. As a general rule, the gas is *rich* and not *poor* when it *smokes*, although it *may* proceed from having an improper burner, even with poor gas. For cooking or heating purposes, the proper way of burning gas is with an excess of air, so as to get only a blue flame, which then gives the maximum of heat, and no light.

With a few general observations I will conclude. The distillation of coal is more closely allied with the operations going on continually in our own bodies than, without reflection, it appears to be. The process of gas making is this:—Coal is placed in a red hot retort, which retort is closed, so as to exclude air, and decomposition goes on. The vapours and gases pass through the condenser and purifiers, are stored in the gas-holder, and distributed by pipes for use: the solid matter remaining in the retort is *coke*, and the liquids are collected in a well for that purpose. What process goes on in our bodies? We place the food in our stomach, which may be called the retort; it is there decomposed and purified, when it is distributed by pipes to every part of the body, to support that continued combustion which is ever being carried on in every one of us. In a very few years, if we are alive, our whole bodies will have been changed by this combustion, and food is but the fuel which, by being continually replenished, keeps us from burning away, and re-composes as fast as we are decomposed. The food and the liquid pass off from us as sub-products in the same way as in the distillation of coal. The analogy between the one process and the other is, as I conceive, complete.

"We live, and move, and have our being" by the food we eat, and by God's will; but the food we eat is not destroyed, it is only altered in form. Every grain may be accounted for, and after we have done with it its elements enter into other bodies. We are all of us but walking distilleries in human form, unconscious cannibals, living one upon the other; and it is not too much to say that the food we have *this* day eaten has been produced to some extent from the elements of our ancestors' and friends' bodies. Every breath we breathe is pregnant with death to animals, but with life to vegetables.

GEO. BOWER.

COPIAPO EXTENSION RAILWAY COMPANY.

An adjourned general meeting of proprietors was held at the company's offices, No. 2, New Broad-street, yesterday,—Mr. J. LABOUCHERE in the chair.

Mr. E. J. COLE (the secretary) read the notice convening the meeting.

The CHAIRMAN said it would be recollected that when last he had the pleasure of meeting the proprietors it was agreed an adjournment should take place, as Mr. Wheelwright, their colleague, was on his way to England; that gentleman, he was glad to say, was now present, and who, being fully acquainted with the whole of the details, would be able to give all the information that shareholders required, and which, he thought, would be satisfactory. He regretted that Mr. E. Woods, their consulting engineer, was unavoidably absent, being obliged to attend a Committee at the House of Commons.

Mr. WHEELWRIGHT then gave a lengthened description of the position and prospects of the undertaking. He confessed that when he first arrived at Copiapo everything was very much depressed, the revolution having swept over the country and taken away the population, but the aspect of affairs had now much improved. With regard to their line of railway, he was glad to be able to inform the proprietors that by means of a common American engine of about 22 tons, they went up the line with 25 tons of cargo from Pabelion to the summit of the hill, a distance of about 15 miles, in 56 minutes, without the slightest difficulty, and descended the other side of the hill in the same satisfactory manner. The conclusions the engineers came to were that, with a locomotive properly constructed for the service, there would be no difficulty whatever that could not be easily overcome, and that the traffic would go on gradually increasing. When the line was first projected there was a very large business in Copiapo, which, to a certain extent, temporarily fell off until the construction of the line was completed. Then came the revolution, which swept over the country and took away their miners; and then followed the earthquake, which desolated the whole province. So that they had had a great many difficulties to contend with, but they had overcome them all; and his impression was when their locomotives got to work theirs would become a good paying line. Already there was traffic enough, but it was capable of being largely developed, because the country was full of silver and copper mines, which must be eventually developed, and the produce necessarily conveyed upon their line of railway. He believed that Chanarcillo was the richest silver district in the world, and that there were vast treasures yet to be found. What they most desired was to get the inhabitants into the habit of reducing the silver ores at Chanarcillo, as it had been proved that ore of eight marks the "cajon" could be reduced at a very handsome profit, notwithstanding the expense of conveying the coal over the road. The Mines at Chanarcillo having been so exceedingly rich, and having yielded such immense returns, it could not be supposed that they were worked out; on the contrary, they found that the Chanarcillo mines were beginning to yield ore at the foot of the hill, which was of the utmost importance, seeing that it had always been supposed that the riches were exclusively confined to the hill of Chanarcillo; but, having found ore, they were now upon the plains, and were working successfully in the immediate neighbourhood of the railway. There were also copper mines of very considerable value in that district, and the probability was that those copper mines would be worked with great success. He also believed that the produce of the mines of Cerro Blanco would yet be carried down to Chanarcillo, and there smelted, and then brought down their line to Pabelion, and thence to Caldera. Cerro Blanco was a vast district. Relative to the strength of the rails, he read letters from Mr. Traggart and Mr. Evans, to the effect that the strength of the rail would answer all the purposes for a slow mineral traffic, and stated that Mr. E. Woods, their consulting engineer, under whose direction the locomotives had been constructed, confirmed the opinion that the rails would be of sufficient strength for all the requirements of their traffic. After having traversed the whole line some short time since in company with the engineer, he (Mr. Wheelwright) inquired of him whether there would be any difficulty in working it with locomotives, when he replied "that there would not be the slightest trouble or difficulty. As they would have to travel slowly, the line could be worked with every success with proper locomotives." They had the opinion of four practical engineers that the line was perfectly competent to do the work.

Mr. T. PARKER enquired if the traffic on the line showed any tendency to increase?

Mr. WHEELWRIGHT replied that even with mule haulage the traffic continued to increase, and it was his impression that when their locomotives got to work there could be no doubt of the result.

The CHAIRMAN said that they expected the next advices would inform them that one of the locomotives was at work.

The directors' report, which was submitted at the last meeting (and which appeared *in extenso* in the *Mining Journal* of Feb. 9), was then unanimously adopted.

Upon the proposition of Mr. HANKEY, seconded by Mr. MOORE, it was resolved "That the directors be authorised to make arrangements for the payment of an amount not exceeding 9000*l*. for the liquidation of the stock and plant, and other debts incurred by the company; and for such purposes the directors be authorised to issue bonds or acknowledgments of debt by the company, providing for payment at a future time and for interest in the meantime."

It was also resolved "That such bonds may be issued at such rate of interest, not exceeding 7 per cent. per annum, and upon such terms and conditions, and with such option of conversion into shares as the directors may from time to time think advisable."

There being 190 shares upon which the calls had not been paid, it was agreed that they should be forfeited to the company.

Messrs. Dickson and Wheelwright, the retiring directors, having been re-elected, the thanks of the meeting were unanimously accorded to Mr. W. Wheelwright for the satisfactory explanation and information he had given to the meeting.

Mr. T. PARKER proposed that in future the company's general meetings be held half-yearly, instead of annually, and that 10 days prior to such half-yearly meeting a statement of accounts, accompanied with a report of the local manager, should be ready at the office for the inspection of shareholders.

The CHAIRMAN replied that the board had intended to convene half-yearly meetings.

The resolution having been put and carried, a vote of thanks to the Chairman terminated the proceedings.

RAILWAY PASSENGERS' ASSURANCE COMPANY.

The ordinary half-yearly meeting of the shareholders was held at the company's offices Cornhill, on Wednesday, Mr. J. CLAY, M.P., in the chair.

Mr. W. J. VIAN (the secretary) having read the notice convening the meeting, the directors' report was taken as read. It stated that the amount of premiums received and due for the half-year ending Dec. 31 last was for railway accident assurance 2693*l*. 14s. 10d., and for general accidents 16,214*l*. 10s. 8d., together amounting to 18,908*l*. 5s. 6d., against 15,587*l*. 17s. 1d. in the corresponding period of 1859. The total income for 1860 was 38,708*l*. 10s. 7d., against 30,765*l*. 14s. during 1859, showing an increase at the rate of 25 per cent. From the available balance of 10,953*l*. 10s. 8d. interest for the half-year ending December would be paid to proprietors on the paid-up capital, at the rate of 4 per cent., prescribed by the Deed of Settlement, and the remainder would be held as a fund to meet the risks upon the policies in force.

The CHAIRMAN, in moving the adoption of the report, said it would have been much more agreeable to the directors had they been able to have announced something more than the interest of 4 per cent. upon the paid-up capital, or had they been able to have given something substantial, instead of reiterating those explanations of prospective prosperity in which they had hitherto indulged, and which they still anticipated with equal confidence. He had no doubt most of the shareholders must have been struck, upon seeing the large business the company did, with the very small amount of nett profits. He was not speaking of the large amount added to the reserve fund and the replacing of capital, for it was his opinion, and he had no doubt the meeting shared in the idea, that nothing could be strictly called profits, according to the agreeable sense of the word, beyond that amount that they were able to put into their pockets; and when shareholders saw the exceedingly small proportion that the profits bore to the gross receipts, they possibly might think that there must be some cause for it which was more or less within the control of the directors. Shareholders had probably been struck with the amount of working expenses when compared with the similar expenses in life assurance companies. That comparison, however, was altogether illusory, for, in the first place, it might be said that the increased revenue of their company had reduced those expenses from a charge of 49 per cent. upon the receipts to a charge of 35 per cent., and of that 35 per cent. which they put down to working expenses 15 per cent. was duty paid to the Government, an absolute expenditure over which, of course, they had no control. That comparison would also be illusory for this reason—500 or 600 policies in a year would be a handsome addition to the business of any life assurance, but in their company they had shown that during last year they had added to the business between 5000 and 6000 policies, all requiring the same work on the part of clerks in first effecting those policies, and in renewals and so forth. It might, therefore, be fairly said that, as far as that part of the office work was concerned, they stood in the proportion of ten to one as regarded their position when compared with that of ordinary life assurance companies. The gradually increasing addition to the number of policies was, of course, exceedingly satisfactory, but at the same time it added very largely both to the work in the office and also to the work of the directors. They had been obliged to increase somewhat their staff of clerks, but in spite of that there had been a reduction in the working expenses in four years from 49 to 35 per cent. (Hear, hear). And the directors had appointed a committee to investigate sundry proposals, by which it may be possible to still further decrease the expenses, and at the same time to increase the receipts; and he was no without hope that the labours of that committee would be attended with a satisfactory result. There could be no doubt that they suffered from many causes, and one of them he believed (and it was the belief of the board generally) had been unavoidable—imposition on the part of some persons who had assured; but he thought by the investigation now made the company's compensation would be reduced to something like that which was honest and just. He did not admit any *laches* on the part of directors in not properly looking over and investigating the claims; but it was obvious that, until the principles upon which the company were formed were perfectly well known, it would have been inexpedient to have investigated too closely the policies becoming claims consequent upon accidents. Now the character and principles upon which their company was formed were known to everybody who dealt with them—that the company always acted in a fair, and more than a fair, manner; for they always acted in a liberal spirit. But now that their character had been established the company were in a position to more minutely investigate any case where they thought imposition or dishonesty was being practised. (Hear.) There were also several other points under investigation, which it was likely would lead to more equal proportion between the nett profits and the gross revenue than at present appeared. If that should not be so—if that company should not realise its most sanguine expectations, and which those who knew it best had always and still entertained—it would be certainly, so far as his experience went, the very first instance where an individual or a company having hit upon a method of supplying a want that was generally felt, had not been amply repaid for the trouble taken. (Hear.) That they had supplied a great public want there could not be the shadow of a doubt, and their policies showed that the objects aimed at were perfectly approved. Their average policies, instead of being, as was common with other insurances in very good positions 200 a year, was 200 per week; which was a pretty plain proof that the want was generally felt and generally appreciated. Being himself persuaded that the want was felt and acknowledged, that the means of supplying it were furnished, and that the public were now growing familiar with the advantages which the system offered, if they did not succeed it would be the first instance he had ever known where a public want had been supplied and had not proved remunerative. In conclusion, he pointed to the late accident on the South-Western, wherein the verdict of the jury exonerated the railway company from the charge of negligence, and, consequently, from liability to those who were injured, as showing the importance of a company which afforded facilities for insuring against railway as well as every other class of accident, and moved the adoption of the report.

Mr. HARRISON seconded the motion, which was carried unanimously.

The dividend at the rate of 4 per cent. per annum, payable on and after the 8th inst., was then announced.

Mr. FRITH, who expressed his great satisfaction at the address of the Chairman, moved the re-election of the directors who went out by rotation, which having been carried, the auditors were re-elected, and a vote of thanks was accorded to the Chairman and his colleagues the acknowledgment of which by Mr. Clay concluded the proceedings.

WEEKLY LIST OF NEW PATENTS.

GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.—Hon. W. E. FITZ MAURICE, Hyde Park-gate: Generating heat for locomotive, marine, and other boilers and furnaces.—J. B. PASCAL, Lyons: Generating burning gases to be applied as a motive-power, and in apparatus for the same.—J. HORN, Whitechapel, High-street: bituminised paper-pipes, and other similar articles.—T. PEDRICK, Brighton-terrace, Brixton: Motive-power by water.—J. LOUCH, Fenchurch-street: Furnaces.—J. LONGSHAW, Manchester: Applying brakes to the wheels of railway and other carriages.—D. EVANS, Stratford: Railway and other wheels.—J. B. MANNIX, Torriano-grove, Kentish Town: Applying springs to railway and other carriages.—A. HORWOOD, Great Quebec-street, New-road: Application of electricity for communicating by signals with carriages in motion on railways.—A. BARCLAY, Kilmarnock: Pumping-engines.—R. MUSHET, Coleford: Manufacture of cast-steel (two patents).—J. YOUNG, Limefield: Bituminous substances.—E. ETTRICK, North Hylton: Prevention or consumption of smoke.—MARTIN CHRETIENNOT, and P. L. RODET, Paris: Forges.—W. WEALLENS, Newcastle-upon-Tyne: Steam-engines and boilers, and in propelling and steering vessels.

PRESERVATION OF IRON, &C., FROM DECAY.—Messrs. Piles and Smith, of West Hartlepool, have patented an invention which relates to a peculiar composition and enamel, for protecting iron and other surfaces from corrosion and decay, and is applicable to iron ships, buoys, reservoirs, gas, water, and other pipes, dock gates, and to various other useful purposes, and consists in the primary application to the surfaces to be protected of a preparatory coating of a red composition, consisting of a combination of litharge, Venetian red, and pine varnish, over which is applied a coating of a composite enamel, consisting of a combination of resins, gums, or any pitchy or bituminous substance, with the addition of coal-tar or oil. They first give the surfaces to be protected a coat of the composition, and afterwards a coat of the enamel, which they pour on in a hot lava state, or they plunge the pipes or other articles to be preserved in the melted enamel, or they spread it over the surface with a brush. The proportions of the ingredients used in the composition or enamel may be varied to suit especial requirements.

TREATING BITUMINOUS ROCKS.—Mr. E. Duclos de Boussois, of Paris, proposes to extract bitumen from rocks by first pulverising the rock and then melting out the bitumen by steam or otherwise. The melting is performed in an inverted cone, with a hole at the bottom for the escape of the fluid bitumen.

ROLLING-MILLS.—Capt. Blakely, half-pay R.A., of Holywood, county Down, provisionally specified an invention, which consists in forming spiral grooves in and around rolls to be employed in the rolling of metals, where the bar to be rolled is required to be taper or otherwise varied in shape or size from end to end, or at different parts of its length. He uses the spirally grooved rolls by gearing together and driving them in the usual manner.

MANUFACTURE OF CHLORINE.—Mr. Christopher Binks, of Parliament-street, has provisionally specified an invention, the object of which is the economical propuction of chlorine; it consists in effecting the decomposition of hydrochloric acid through the agency of oxygen gas mixed with or brought in contact with the hydrochloric acid under a high temperature, and the conjoint action of any substance capable of retaining or fixing by combination, or otherwise, the water formed by the reactions between the oxygen and hydrogen of the hydrochloric acid, but not capable of retaining or fixing the chlorine, which is thus liberated in the gaseous form.

RAILS.—An invention has been provisionally specified by Mr. H. Jones, of Neath, which consists in forming the rails in two parts, whereof the under part is fixed to the ordinary sleepers, and the upper part is inserted in the said lower part, and fixed therein by bolts or otherwise. The upper part of the rail is formed with a tongue, which is capable of fitting into a deep groove in the lower part thereof, the bolts or other fastenings being passed through the two jaws or sides of the said grooves, and through the tongue of the upper part of the rail. The two parts of the rail are arranged so as to break joint, thereby dispensing with fishes. The lower part of the rail is to remain as fixed, the upper alone being changed as required in consequence of its wear.

OBTAINING MOTIVE POWER.—Some improvements, which consist in a peculiar construction and arrangement of apparatus, by means of which atmospheric air compressed and heated to a high degree is applied to the production of motive power, have been provisionally specified by Mr. F. Guibé, of Toulouse, France. In this system the cold air is forced by a pump into a strong closed recipient, in which it is heated to, say, about 250° or 300° (centigrade), and from thence passed to a driving cylinder, similar to that of the ordinary steam-engine. The heating of the compressed air in the closed recipient may be effected internally by hydrogen, carburetted hydrogen, or other suitable gas, or externally by any ordinary fuel, such as coal or coke. In the latter case, the fire instead of acting directly on the air recipient may act on an interposed bath of fused metal, or on a boiler charged with oil or a saline solution, and surrounding the recipient entirely or in part. To check the heating produced by the compression of the air and the friction of the piston, the feeding pump is enclosed in a case charged with cold water. The air passing to the pump is carried through the water of this case, and, thus impregnated with moisture, is thrown into the closed recipient, where the aqueous particles are converted into steam. To economise as far as possible the heat of the air on its escape from the driving cylinder, it is carried round the conduit of the cold air delivered by the pump. The expansion gear is so arranged as to vary independently (by means of two distinct guide pieces), the course of two slide valves (one expansion and one distribution), enclosed in two superposed boxes. The piston packings are composed of a series of metallic plates with parallel faces, between each of which is placed a metallic wedge. The plates alone are in contact with the piston-rod and the surfaces of the cylinder, to which they fit exactly, so that the packing is continuous on all sides. The pressure of these plates against the wedges, the cylinder, and the piston-rod is maintained by metallic springs.

HALTER AND DOUARD'S FLEXIBLE TUBES.—These improved tubes (according to the specification filed by Mr. Henry, patent agent, Fleet-street) are manufactured by first winding a coil of iron-wire spirally round a mandril, then easing the coil, next covering it with three layers of a cloth band, coated with caoutchouc, gutta percha, and pitch, and wound on spirally with overlapping edges, twice in one, and once in the other direction; over this is wrapped a spiral covering of caoutchouc, and over that a spiral binding of wire. The covering machinery preferred consists of a combination of apparatus, in which a carriage is employed, supporting a bath of the coating material, kept hot by a water casing, heated by a fire-pan or fire-box on the carriage, such carriage being so mounted that it may be moved at pleasure, either by hand or by bevel toothed wheels and chain, with disengaging clutch arrangement.

ALARM WATER-GAUGE.—Another claimant to the honour of having invented the safety alarm-float, described in the Journal of July 28, 1860, as Turnbull's, has appeared in the person of Mr. H. C. Symons, of 2, George-street, Blackfriars-road; his patent is dated 1853, which date it is thought will render void the claims of Messrs. Abbot and Co. (Newcastle), Mr. Wren, and many others. The various claimants appear all to have worked from one pattern, so that priority of patent right is the sole consideration.

COMPOUND FOR COATING SHIPS.—A compound, with which it is proposed to coat ships and all wooden constructions for marine purposes, to preserve them from the attack of worms and other deteriorations, has been provisionally specified by Mr. Swiatoslar Zoubtchaninoff, of Paris and St. Petersburg. The compound contains—bitumen, 4 parts; resin, 4 parts; essence or spirit of black turpentine, 6 parts; colza oil, 2 parts; and oil of vitrol, 8 parts. The whole are placed in a caldron, heated, and mixed together. When applied to ships very strong brushes should be used, to make it penetrate the pores of the wood, and it should be allowed four or five days drying before the vessel is placed in the water.

GREAT WEST SETON.—I have just paid a visit to Camborne, to inspect a mining sett, formerly called Wheal Camborne (now GREAT WEST SETON, from its close resemblance to that rich and profitable mine, the West Wheal Seton). This sett, or mine, has been taken up, and working operations commenced, which consist of clearing the old adit level, which is driven some 100 fms. to intersect some of the lodes; this was done about forty years since, and a shaft sunk 13 fms. below the adit level. There are three lodes cross-cut in this adit; all of them have a metalliferous appearance, and promise to produce abundance of copper and tin ore if explored. The former company met with one of these lodes at the bottom of the shaft, in which they had a small steam-engine, of 19-inch cylinder. They attempted to cut through this lode, and got into it 6 feet, but did not reach the south wall, as I have been informed by an old miner who worked there. The engine and pitwork were inadequate to keep down the water, consequently the works were immersed, and they never could clear them again. This, and the poverty of the company, put a stop to all further operations, and the mine was forsaken. This magnificent lode is composed of peach, spar, very much decomposed prian, mundic, black and yellow copper ore. Another strong and promising lode, seen in the adit level, will intersect this lode some few fathoms below the adit level; this is a favourable omen, under all circumstances. It was thought at the time, that if the party could have continued on the sinking a little deeper they would have found large deposits of copper in this lode: 50 fms. to the west of the engine-shaft this lode was intersected by a cross-cut from the adit level. The stuff taken from it in this place, although not more than 3 fms. below the surface, from its appearance, is a warranty of riches not far below, and a sufficient inducement to the practical mind to invest cash to explore this lode, were there no other to be seen in the sett. But there are many other lodes traversing the ground which comprises this sett, it being 740 fathoms in length on the run of the lodes, and 550 fms. from north to south. The stratum is quite cougenial for tin and copper, being a light soft blue slate, or killas. The geological position of this valuable mining property cannot be surpassed, it being due west of the West Wheal Seton, on the same productive lodes. Further east is the West and East Crofty and the Carn Brea Mines; and north-east, the North and East Pool Mines. Judging from the situation of the ground, the character of the lodes and congeniality of the killas, I think this to be one of the best setts that can be found idle in the western part of Cornwall, and that it will not take any large amount of capital to secure great wealth by working this mine. A good quarry for stone is in the sett. Close by the engine-shaft a 40-in. cylinder steam-engine will be, I think, ample power to put the mine 100 or 150 fms. below the adit level. The shaft is already put down 13 fms.; one lode only intersected, and this showing every indication that copper in abundance is very likely to be met with at very shallow levels. I should be very much surprised if this lode did not produce a great deal of copper about the 30 from the adit. I have been interrogated since I have returned, in speaking about this lode, &c., why, if there be such prospects, the sett has been left till this time idle? I might ask the parties why was not the Devon Great Consols found out before, and many other rich mines? or, why were railways not in vogue before, seeing they are so convenient for travelling and traffic? There is no doubt but that everything will result as required: all the good mines will not be found at once, nor other sciences.—J. SEYMOUR. [P.S. There are other mining setts in this parish that I intend to call public attention to shortly.]

ASTHMA.—Dr. Locock's pulmonic wafers give instant relief, and a rapid cure of asthma, consumption, coughs, and all disorders of the breath and lungs. To singers and public speakers they are invaluable for clearing and strengthening the voice. They have a pleasant taste. Price 1s. 1½d., 2s. 9d., and 11s. per box. Sold by all druggists. 133

HOLLOWAY'S PILLS AND OINTMENT—ALWAYS RIGHT.—A great and precious property possessed by Holloway's inestimable remedies is that no skill or experience is required for their successful administration. No education or intelligence is necessary for using them with advantage beyond the capacity of understanding the plain and intelligible "instructions for guidance" accompanying each box and pot of the medicaments for the cure of all internal and external ailments. Prof. Holloway has beneficially placed such printed rules around his remedies that error is impossible after they have once been read with attention. In these pills there is nothing nauseous to the taste, or trying to the most tender age or most delicate constitution; in the ointment nothing to annoy the most sensitive skin. 134

THE CRICCETH SLATE COMPANY (LIMITED).

Capital £30,000, in 10,000 shares of £3 each.
Deposit, 10s. on application, and £1 on allotment.
orporated pursuant to the Joint-Stock Companies Acts, limiting the liability of each shareholder to the amount of his subscriptions.

DIRECTORS.

JOHN ALEXANDER, Esq , Milford, Carlow.
AUGUSTUS CLAYTON, Esq., Coombe Bank, Sevenoaks.
Sir JAMES DOMBRAINE, 20, Molesworth-street, Dublin.
JOSHUA FINNER, Esq., South American Chambers, Cecil-street, Strand.
CHARLES HENEAGE, Esq., 3, Cadogan-place, Belgrave-square.
Capt. JORDAN, Chertsey, Surrey.
Major-General MASON, Brompton.

BANKERS—Bank of London, Threadneedle-street, London.

BROKERS AND SHARE AGENTS.

Messrs. Ross, Lainson, and Bedford, 4, Lothbury, London.
Messrs. Orr and Co., 19, Waring-street, Belfast.
Messrs. J. and J Stephens and Co., 44, Dame-street, Dublin.
John K. Thomas, Esq., Bristol.

CONTINENTAL AGENT—Alfred Barber, Esq., Hamburgh.

SECRETARY (pro tem.)—Mr. Robert Down.

OFFICES.

4, LOTHBURY, LONDON, E.C.; 20, MOLESWORTH STREET, DUBLIN.

PROSPECTUS.

This company has been formed for the purchase and working of a very valuable slate grant and quarry, extending under several farms and lands, known as Mynyddydnyfed and Brach-y-Saint, situated in the parish of Criccoeth, in the county of Carnarvon.

With a capital of £10,000 it is estimated that from 5000 to 6000 tons of slate can be made during the first year of the company's operations, which, at the present selling value, will give a return of about £12,500; this, after deducting working expenses, and making ample allowance for all cost of management, may be expected to leave a surplus sufficient to pay from 30 to 35 per cent. upon the capital invested.

The Mynyddydnyfed Quarry is held under a grant for 23 years, from the 1st of January, 1861, under very favourable conditions, and subject only to the limited royalty of one-fourteenth of the nett produce, and a dead rent of £5; an agreement has been entered into for the purchase of the quarry for the sum of £8000, of which the vendor has agreed to receive £4500 in paid-up shares.

Shareholders can at their option pay up the whole amount of their shares; in all such cases interest at the rate of 6 per cent. per annum will be allowed upon the amounts so paid up, beyond the calls made for the time being.

In order to prevent the possibility of failure, and loss arising from carrying on the company's operations with a deficient capital, all deposits will be returned in full, unless a sufficient amount of capital is subscribed to enable the directors, not only to purcase the quarry, but to carry on the working operations with the requisite vigour.

No special Articles of Association exist. The company being managed under the provisions of Table B of the Joint-Stock Companies Acts, all matters of general importance will be decided by the shareholders at meetings summoned especially for this purpose.

Full prospectuses, with reports upon the quarry, and forms of application for shares, can be obtained from the brokers, or the secretary, at the company's offices.

THE TORBANE HILL MINERAL.

It is a disgrace to Science that any doubt should ever have been thrown by any scientific man upon the nature of this substance, now so well known every where throughout the civilised globe as the Torbane Hill Mineral, with the *alias*, when under disgrace, of Boghead Gas Coal. Nine-tenths, or even a larger majority, of all scientific men, led by those who are at the head of their departments of the various physical sciences, are now quite as one on the subject. The States of the Zollverein and the Prussian Government decided years ago that the substance in question is not coal, and so not liable to Customs' duty. And lately the French authorities also have pronounced the substance to be bituminous schist (*bitume solide ou pierre de schiste*), and therefore able to pass into France free of the duty leviable upon coal. That the base of this mineral is purely a clay, and not, as happens in the case of all coals, preponderating fixed carbon=charcoal or cinder, is a fact now as well known every where as any physical fact of the kind can be. It is, moreover, well known that the mineral substance in question gives 75 per cent. of a valuable tar or oil, capable, by easy purifying and rectifying processes, of yielding a highly valuable, because most economical, illuminating oil, as well as thicker oil, useful for all sorts of lubricating purposes, solid paraffine, and other important products. That on a clay base equal to one-fourth in weight of the substance, there should be superinduced the enormous proportion of three-fourths, or 75 per cent. of oil—usually called, as it is, paraffine oil—is one of the wonderful facts relating to a mineral which is surrounded by an atmosphere of wonders. The Torbane Hill Mineral, in fine, is one of the most astonishing discoveries of the day, in an age of physical discoveries. It must be exceedingly gratifying, therefore, to all the patrons of physical science, and indeed to all lovers of truth, that an opportunity is about to be afforded for the fullest discussion, by the scientific men of all countries in Christendom, on the nature and peculiar qualities of this celebrated substance. If the physical sciences singly—if all the physical sciences united—be not adequate to tell whether this thing be coal, or oil-clay, what are the physical sciences worth? In fine, the mineral has had much *eclat* already, and is likely to have still a great deal more celebrity, higher and better. Its fame will be world-wide.

The opportunity alluded to will be afforded by an action which Mr. and Mrs. Gillespie, of Torbane Hill, have instituted against Messrs. Young, Binney, and Meldrum, of the Chemical Works, near Bathgate, and in the immediate vicinity of Torbane Hill itself It is nowise necessary to detail, on the present occasion, many particulars regarding the nature and operation of the law action in question; it may suffice to state that, whereas Mr. and Mrs. Gillespie have been injured, and are in course of being injured, to a vast extent by that chemical company's operations, in lowering and keeping down the price of the Torbane Hill Mineral in the market, by their alleged patent, Mr. and Mrs. Gillespie conclude against that company on this ground (among other grounds), that whatever patent, good or bad, they may have applicable to coal, it cannot, with any propriety, or without violation to truth, be held to be applicable to the Torbane Hill Mineral, which is not coal at all, but is, in truth, a new mineral, it being indeed "a new mineral substance, having an argillaceous base, and of so peculiar a nature as to constitute it a new and very peculiar variety of bituminous schist, shale, or clay," and generally called the Torbane Hill Mineral. The scientific world will learn with pleasure the information that so satisfactory an investigation is to be afforded.

All scientific gentlemen, whether chemists, microscopists, mineralogists, or geologists, as well as al practical men, engaged in any occupation which requires, or may permit, for any purpose, the use of the Torbane Hill Mineral—in whatever country of Europe or part of North America—who feel disposed to bear testimony to the truth concerning this substance, by declaring their reasons for holding it not to be coal, are requested to send their names, without delay, to Mr. GILLESPIE, of Torbane Hill, Scotland (office, 7, North-street, David-street, Edinburgh), or to any of his agents in England or Scotland, viz.:—

Messrs. CONNELL and HOPE, 3, Princes-street, Westminster.
Messrs. SIMSON and TRAILL, Solicitors, Westminster.
Messrs. D. M. and H. BLACK, W.S., Edinburgh.
Messrs. MORTON, WHITEHEAD, and GREIG, W.S., Edinburgh.
Messrs. MACNAUGHTON and FINLAY, W.S., Edinburgh.
Messrs. MITCHELL, ALLARDICE, and MITCHELL, Writers, Glasgow.

AUSTRALIA AND NEW ZEALAND

WHITE STAR EX-ROYAL MAIL CLIPPERS,

SAILING FROM

LIVERPOOL to MELBOURNE on the 1st and 20th of every month.
FOR MELBOURNE.

Ship.	Captain.	Register.	Burthen.	To sail.
QUEEN OF THE MERSEY	ALLEN	1220	3750	March 25.
SHALIMAR	BROWN	1700	5000	April 20.
PRINCE OF THE SEAS	BROWN	1316	4000	May 20.
BLUE JACKET	WHITE	1559	4750	June 20.

Owing to the tides, the March packet will sail as above.

The clippers of this line are the largest, finest, and handsomest in the trade, and are well known for their famous passages, and the unswerving punctuality of their sailing engagements. Passengers must embark, without fail, on the day previous to advertised date.—For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GRINDLAY and Co., 55, Parliament-street; or, SEYMOUR, PEACOCK, and Co., 116, Fenchurch-street, London.

Willox's Australian and New Zealand hand-books sent for two stamps.

INVESTMENTS IN BRITISH MINES.

MR. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING, giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, the DIVIDENDS PAID, &c.; price One Shilling. RELIABLE INFORMATION and ADVICE will at any time be given by Mr. MURCHISON, either personally or by letter, at his Offices, No. 117, BISHOPSGATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

OPINIONS OF THE PRESS ON MR. MURCHISON'S WORK ON BRITISH MINING, PUBLISHED IN 1856.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—*Mining Journal.*

The book will be found extremely valuable.—*Observer.*

A valuable guide to investors.—*Herapath.*

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—*Morning Herald.*

A valuable little book.—*Globe.*

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—*Morning Chronicle.*

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—*Derby Telegraph.*

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—*Leeds Times.*

To those who wish to invest capital in British Mines, this work is of the first importance.—*Welshman.*

This is really a practical work for the capitalist.—*Stockport Advertiser.*

This work enables the capitalist to invest on sound principles; in truth, it is an excellent guide.—*Plymouth Journal.*

All who have invested, or intend to invest, in mines, would do well to consult this very useful work.—*Ipswich Express.*

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide.—*Warwick Advertiser.*

We believe a more useful publication, or one more to be depended on, cannot be found.—*Plymouth Herald.*

Of great value to capitalists.—*Sunderland Times.*

Those interested in mining affairs, or who are desirous of becoming speculators, should obtain and carefully peruse the work.—*Monmouth Beacon.*

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—*Poole Herald.*

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book.—*North Wales Chronicle.*

A very valuable book.—*Cornwall Gazette.* [*Glasgow Examiner.*

All who have invested, or intend to invest, in mines should peruse this able work.

Mr. Murchison will be a safe and trustworthy guide, so far as British Mines are concerned.—*Bath Express.*

Is deserving the attention of every one who seeks profitable investment of his capital.—*Brighton Examiner.*

It is full of carefully compiled and reliable information relative to all the known mines in the United Kingdom.—*Sheffield Free Press*

To capitalists the work will prove very serviceable.—*Birmingham Mercury.*

East India House.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL, notice is hereby given, that the DIRECTOR GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 18th inst., to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY— IRONMONGERY.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 18th day of March, 1861, after which hour no tender will be received. GERALD C. TALBOT, Director-General.

India Office, March 5, 1861.

BUILDING GROUND.—The LLANELLY LOCAL BOARD OF HEALTH are PREPARED to GRANT LEASES for 99 years of their LANDS for BUILDING PURPOSES. The sites are advantageous for the erection of dwelling-houses, manufactories, warehouses, &c., being near the new dock and the South Wales and Llanelly and Llandilo Railways. New roads are in course of formation throughout the estate, and every facility will be afforded for encouragement in building. Water is already supplied by the Board in that locality.

For particulars, apply to the undersigned; and to Mr. BAGOT, the Surveyor of the Board, at whose offices plans of the estate are deposited.

FRED. L. BROWN, Clerk to the said Local Board.

Town Hall, Llanelly, February 22, 1861.

PATENT GOLD AMALGAMATING AND QUARTZ CRUSHING MACHINERY.—JOHN H. SWAN, 153, QUEEN STREET, GLASGOW, PATENTEE and MANUFACTURER of CRUSHERS, AMALGAMATORS, PORTABLE STEAM ENGINES, and other machinery for the gold diggings. A circular containing full particulars can be had on application, post free.

TO COLLIERY OWNERS, MINE COMPANIES, &c.—SMITH AND OLIVER, MECHANICAL and MINING ENGINEERS, SWANSEA, UNDERTAKE to SINK SHAFTS, ERECT MACHINERY, PIT FRAMING, and to COMPLETE EVERY KIND of COLLIERY WORK, either at home or abroad. PLANS, SPECIFICATIONS, and ESTIMATES PREPARED.

CONDIE'S PATENT STEAM HAMMERS.—FIRST-CLASS "MOVING CYLINDER" STEAM HAMMERS, from 5 cwts. to 7 tons, suitable for jobbing forges, puddling forges, and the smiths' shops of engineers, shipbuilders, &c. Pressure of steam required, 25 lbs.

BAIN AND WYLIE (Successors to John Condie).

Shields Ironworks, 330, Eglinton-street, Glasgow.

THE FESTINIOG SLATE QUARRY COMPANY (LIMITED).—The Directors of this company are PREPARED to RECEIVE TENDERS for the SUPPLY of TWO HUNDRED AND TWENTY TONS of BRIDGE RAILS at PORTMADOC, NORTH WALES, within eight months from the 1st of May, 1861. Forms of specification, contract, and tender, which alone will be received, may be had on application to the undersigned, at the address given below, and tenders must be sent in not later than the 18th day of March next. The directors do not bind themselves to accept the lowest or any tender. By order, HENRY WHITWORTH, Sec.

Carlton-buildings, Cooper-street, Manchester, February 28, 1861.

CALEDONIAN RAILWAY COMPANY.—Notice is hereby given, that the next HALF-YEARLY GENERAL MEETING of the Caledonian Railway company will be HELD at the Trades' Hall, 85, Glassford-street, Glasgow, on TUESDAY, the 12th day of March, 1861, at One o'clock afternoon, in terms of the statute.

The transfer books will be closed from Wednesday, the 27th February, inclusive, until after the meeting. By order of the Board,

THOS. SALKELD, Chairman.

Company's Offices, Glasgow, Feb. 12, 1861. ARCH. GIBSON, Sec.

CLARENDON CONSOLIDATED MINING COMPANY OF JAMAICA (LIMITED).—Notice is hereby given, that the directors have this day made a CALL of TWO SHILLINGS AND SIXPENCE PER SHARE on the shares of the company, PAYABLE on or before the 10th day of April next, at the bankers of the company, Messrs. Heywood, Kennards, and Co., No. 4, Lombard-street, London, and the shareholders are hereby required to pay the same accordingly.

The transfer books will be closed from 22d January to 1st February, both days inclusive. By order, JOHN H. KOCH, Sec.

187, Gresham-house, Old Broad-street, London, January 22, 1861

SILVER VEIN MINING COMPANY (LIMITED).—Notice is hereby given, that an ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the offices, No. 3, Cannon-street, London, E.C.. on TUESDAY, March 19th, 1861, at One o'clock P.M. precisely, for the purpose of submitting the report of the directors, and statement of accounts up to December 31, 1860; also for the election of directors, and for general business.

The transfer books will be closed from March 11 to March 19, both inclusive.

W. W. MANSELL, Manager.

Registered Offices, 3, Cannon-street, London, E.C., February 25, 1861.

WEST POLMEAR.—At a MEETING, held at Dunn's Hotel, St. Austell, Cornwall, on the 25th ult., for the purpose of adopting the preliminary resolutions for the commencement of the works on the above mine,

P. CLYMO, Esq., in the chair,

It was resolved,—That the name of the mine be known as West Polmear, and that the adventure be divided into 6000 parts or shares, and that the same be conducted on the Cost-book Principle.

Resolved,—That a call of 10s. per share be now and is hereby made, payable at once to Messrs. COODE, SHILSON, and Co., bankers, St. Austell, £2000 thereof to be paid for the machinery and setts, leaving £1000 for the prosecution of the mine.

Resolved,—That Mr. H. W. Higman be appointed the purser, that Mr. W. Body be appointed the resident agent, that Mr. West be appointed the engineer, that Mr. J. T. Pearce be the surgeon to the mine, and that Mr. Charles, of 27, Austinfriars, London, be the official referee in London for this mine.

FOWEY AND PAR UNITED MINES.

In 6000 shares. On the "COST-BOOK SYSTEM."

SECRETARY—Mr. W. S. Trotter.

OFFICES,—No. 1, GREAT WINCHESTER STREET, LONDON.

This mine is situated in the neighbourhood of Fowey Consols and Par Consols. A gentleman well acquainted with the locality states:—"I know of no mine which has been more prudently and carefully planned out, and where the chances of success are so certain." The lodes in this sett are the main lodes of Fowey Consols. The Par Consols, on a parallel hill, by an outlay of £7200, has paid in dividends £280,000.

The shares are principally held in Devon and Cornwall. A limited number can be obtained at £1 per share, by application, on or before the 13th inst., to Messrs. WEBB and GEACH, Stock Exchange; and at 8, Finch-lane, London.

BILLINS LEAD MINING COMPANY (LIMITED).

In 200 shares of £30 each, £20 paid.

These extensive mines are situated in the Halkyn Mountain, extending on the course of the lodes for upwards of a mile. It is scarcely possible to over estimate the importance of the works now being carried out. The captain writes, under date of Wednesday last:—"The flat spoken of in the reports is to be seen in your mine, with fine ore, mixed with spar, &c." This discovery is entirely independent of the main east and west lodes.

A limited number of shares in this undertaking are for disposal, at the upset price of £20 per share.

Applications for shares will be received up to Thursday next, by Mr. GEORGE BATTERS, 5, Cowper's-court, Cornhill; Mr. T. P. THOMAS, the secretary to the company, 2, Crown-court, Threadneedle-street; or Messrs. HEMMING and Co., Royal Exchange.

THE NORTH CENTRAL WAGON COMPANY, ROTHERHAM.

OFFICES,—HOWARD STREET.

DIRECTORS.

GEORGE HAYWOOD, of Rotherham, Ironfounder (Chairman).
CHARLES ATKINSON, of Crabtree Lodge, Sheffield, Merchant.
ROBT. C. HOYLE, Esq., Aughton Hall, Rotherham.
HENRY KING SPARK, Esq., of Greenbank, Darlington.
SAMUEL R. SANDERS, of Parkgate Ironworks, Rotherham.
WILSON WATERFALL, of Rotherham, Banker.

BANKERS—The Sheffield Banking Company.

SOLICITORS—Messrs. Hoyle and Son, Rotherham.

SECRETARY—Mr. John Barras.

THE PATENT ATMOSPHERIC MARINE SALVAGE COMPANY (LIMITED).

Capital £20,000, in 20,000 shares of £1 each. Deposit 2s. per share, and 3s. per share in twenty-one days.

Future calls 5s. per share, at intervals of two months.

A contract having been entered into for the construction of Rainbird's celebrated apparatus for raising sunken vessels, it is requisite that applications for shares be sent in, without delay, to the Union Bank of Manchester, or to the offices, where prospectuses, &c., can be had, and the model seen in operation.

Last year 1811 vessels, valued at upwards of £2,000,000 sterling, were wrecked on the British coast. It is estimated on careful analysis that upwards of 100 per cent. dividend will be realised in the first year of operation. No shares will be allotted except to original shareholders after the construction of the apparatus.

52, Cross-street, Manchester. JOHN COWLE, Hon. Manager.

GOVERNMENT OFFICIALS—REDUCTION IN SCALE OF PREMIUMS.

THE EUROPEAN ASSURANCE SOCIETY ISSUES POLICIES of GUARANTEE, at reduced rates, for officials in or under the Treasury, Customs, Inland Revenue, Board of Trade, Poor-Law Board, Admiralty, and other public departments, and for bank and railway clerks and persons in commercial employments.

Further reductions on the combination of life assurance with guarantee. Annuities granted on favourable terms.

Forms and every information may be obtained at the chief office, No. 2, Waterloo-place, Pall-mall, London.

ALBERT AND MEDICAL LIFE ASSURANCE, 7, WATERLOO PLACE, PALL MALL, LONDON, S.W.

ESTABLISHED 1838.

The business of the Medical, Invalid, and General Life Assurance Society having been amalgamated with the Albert Life Assurance Company, the united businesses will henceforth be carried on under the above title.

Accumulated fund exceeds	£500,000
Subscribed capital	447,180
Paid-up capital	137,000
Annual income from life premiums, upwards of	220,000

The new business is now progressing at the rate of more than £25,000 per annum.

From Prof. De Morgan's report upon the last valuation of liabilities (end of 1858), and the statements of accounts, it appeared at that time that the surplus in favour of the Albert business alone, after providing for every liability, was £192,925 2s. 11d.

HENRY WILLIAM SMITH, Actuary.
C. DOUGLAS SINGER, Sec.

CARADON DISTRICT, ST. IVE, CORNWALL.

IMPORTANT SALE OF THE GREAT CARADON AND SLADE COPPER MINE.

MESSRS. FARGUS WILL SELL, BY AUCTION, at Webb's Hotel, Liskeard, on Tuesday, the 12th day of March next, at Twelve for One o'clock precisely, by order of the mortgagees, under a power of sale from the Great Caradon and Slade Mining Company (Limited), in One Lot,

All that VALUABLE PROGRESSIVE MINE, known as the GREAT CARADON AND SLADE SETT, situate in the parish of St. Ive, in the county of Cornwall, together with the STEAM ENGINE, MINING IMPLEMENTS, UTENSILS, and PLANT now being thereon.

A large sum has been expended in the development of this sett, which presents a most favourable prospect of turning out a lucrative mine.

It occupies an extensive area, is situate in the most favoured district of Cornwall, being due east, and within 400 to 500 fms. of the boundary of the celebrated South Caradon, well known as one of the best paying English mines, and the immediate vicinity of the South Caradon and Moorswater Railway offers every facility for transmission of the produce.

Several lodes have been traced in the sett, both of copper and lead, and it is well known that there are several others.

The property is held under a lease for the remainder of a term of 21 years, from the 11th of January, 1854, less one day, under a royalty of 1-15th of the produce, and certain other usual stipulations.

For a view, apply on the mine; and all further particulars can be known at the mine; or be obtained from the auctioneer's, Clare-street, Bristol; or of Messrs. DANIEL and COX, solicitors, Bristol.

UNDER BANKRUPTCY.

ONE THOUSAND VALUABLE SHARES (all paid up) in the ENGLISH AND AUSTRALIAN COPPER COMPANY; also, THREE old LIFE POLICIES of ASSURANCE, with large bonuses.

MR. MURRELL WILL SELL, BY AUCTION, at the Mart, on Thursday, March 14, by order of the assignees of Messrs. Johnson and Gilman, in suitable lots, ONE THOUSAND £5 SHARES (all paid up) in the ENGLISH AND AUSTRALIAN COPPER COMPANY, which was established in 1851, has very extensive works, exports largely to England, and the profits last year were £40,000, the opening this year of some railroads will give increased facilities, and the trade is expected to be much augmented. There have already been several sums carried to the reserve fund, and the company, which is paying a good dividend, may now be considered fully established. Also, THREE old LIFE POLICIES, two for £999 each, and one for £499, with large bonuses thereon, in the Economic and Edinburgh Life Assurance Companies, on the life of a gentleman now 54 years of age.

Particulars may be had of W. BELL, Esq., official assignee, Coleman-street-buildings; of Messrs. LINKLATER and HACKWOOD, solicitors, Walbrook; Messrs. JACKSON and PARKER, solicitors, 41, Bedford-row; and of Mr. MURRELL, auctioneer and surveyor, 1, Walbrook, City.

WEST ROSEWARNE MINE AND MATERIALS.

MESSRS. WARE AND SON, of Exeter, WILL SELL, BY AUCTION, in One Lot, at WEST ROSEWARNE MINE, in the parish of Gwinear and county of Cornwall, on Tuesday, the 19th March next, by Three o'clock in the afternoon, the following VALUABLE MINE ENGINE and other MATERIALS, consisting of one 50 in. cylinder ENGINE, 10 ft. stroke in the cylinder and 8 ft. stroke in the shaft, with boiler 36 ft. long and 6 ft. diameter, and tubes in the same 3 ft. 8 in. diameter.

Capstan shears and rope, 12 fms. long by 10 in. round; 3 horse whims, shaft tackle, ropes and kibbies.

35 9 ft. 11 in. pumps, clack doorpieces, &c., to match.
5 9 ft. 10 in. pumps, clack doorpieces, plunger pole, &c.
14 9 ft. and 2 5 ft. 8 in. pumps, clack doorpieces, and pole.
40 fms. of 1¼ in. iron bucket rods.
90 fms. of shaft casing, and 90 fms. of iron stave ladders.
45 fms. of 12 in. and 25 fms. of 11 in. wood rods, plates, bolts, &c.

Smiths' bellows, anvils, smiths and miners' tools, &c., together with a large quantity of other articles, and the account-house furniture.

To view the same, apply to the captain on the mine; and for further particulars to J. H. MURCHISON, Esq., 117, Bishopsgate-street Within; or to Capt. W. RICHARDS, Bank House, Redruth.—March 5, 1861.

LEAD MINE.—TO BE SOLD, a VALUABLE MINE, rich in silver, situated in the county of Dublin, within 1½ mile of Bullock harbour, and 2½ miles of Kingstown harbour. The ore contains by assay 24 ozs. of silver, and 75 per cent. of lead per ton. Is cropping out of the surface on a hill side, and free of all royalty and chief.—For further particulars, apply to T. H. ARMSTRONG, 37, Granby-row, Manchester; or to Mr. W. ADAMSON, Liverpool and Birkenhead Slate and Slab Company, 14, Water-street, Liverpool.

HENDRE MINES, NEAR MOLD, FLINTSHIRE.

TO BE SOLD, BY PRIVATE CONTRACT, the VALUABLE MACHINERY and MATERIALS on the MINES, consisting of an 80 in. cylinder STEAM PUMPING ENGINE, 10 ft. stroke, with four boilers (by Fairbairn, of Manchester); a 20 in. WINDING and PUMPING STEAM ENGINE, 4 ft. stroke, with two boilers; a 16 in. WINDING and PUMPING STEAM ENGINE, 2 ft. stroke, with two boilers; 24 in. plunger poles, and 24 in. pumps; H pieces, windbores, &c.; 17 in. working barrel; 9 in. to 4 in. pumps, plungers, &c.; crushing mill, water-wheel, winding apparatus, wrought-iron rods, lathe, pins and nuts, weighing machine, &c.

Mr. JOHN PRITCHARD will show the machinery, &c., on the mines, and applications for further particulars to be made to Mr. C. D. WILLIAMSON, Greenfield, Holywell.

February 27, 1861.

WARWICKSHIRE.

COAL AND IRONSTONE MINES.—TO BE LET, on royalty, upwards of SIXTY ACRES, with TWO ENGINES, &c. There is a canal and public wharf within a short distance, and there is every probability of a railway being made which will afford communications with London and Birmingham. To an enterprising and responsible party the proprietor would afford every liberal accommodation.—Apply to Messrs. RAWLINS and ROWLEY, solicitors, Birmingham.

SOUTH WALES COLLIERY, MERTHYR DISTRICT.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, on very advantageous terms, a HIGHLY IMPORTANT COLLIERY, known as the TYLACOCH COLLIERY, situate in the RHONDDA VALLEY, on the Rhondda branch of the Taff Vale Railway, by which line the coals are conveyed to the Cardiff docks. The quality of the coal is quite equal to the Merthyr coal, and is preferred to it for the use of the locomotives on the line. The thickness of the seam is about 6 ft., and the area is 951 A. 2 R. 20 P.

There is one shaft sunk to the upper 4 ft. vein of coal, a depth of 154 yards from the surface, and the quantity to be raised is estimated at 80,000 tons per annum. The galeage varies from 3d. to 9d. per ton on the large and small coal.

There is a farm attached to this colliery, which is in an excellent state of cultivation, and upon which a large outlay has been made in improvements by draining and otherwise.

For further particulars, apply to Messrs. FULLER and HORSEY, 13, Billiter-street, London, E.C.; or to Mr. D. LLEWELLIN, Mining Engineer, Glyn Neath, Glamorganshire.

TO BE SOLD, ONE of WOOLRICH'S PATENT MAGNETO-ELECTRICAL MACHINES, arranged for the deposition of metals, consisting of four sets of magnets (ten in each set), 24 in. long, and eight revolving armatures, the whole mounted in very strong and substantial iron frames, and in good working condition.—Apply by letter, post-paid, Mr. B. W. GOODE, gold chain maker, 24, St. Paul's-square, Birmingham.

TO CAPITALISTS AND PUBLIC COMPANIES—VALUABLE COPPER MINE IN ANGLESEA, NORTH WALES.—TO BE LET ON LEASE, or otherwise, the RIGHT to WORK a COPPER MINE, recently opened, on the estate of Pendre, in the parish of Llantrisant, about two miles from Bodedern, and eight miles from Holyhead, Anglesea. Reports of competent mining surveyors, including Mr. J. W. Bevan, of Redruth, Cornwall, who acknowledge the ore to be equal, if not superior, in richness to that of the celebrated Parys Mines, may be seen with either of the undersigned, where samples of the copper may be had, and any further information which may be required.—Mr. JOHN B. OWEN, Pendre, Bodedern, Anglesea; or Mr. WILLIAM JONES, 56, Great Homer-street, Liverpool.

TO CAPITALISTS—A SLAB AND SLATE INVESTMENT.—The LEASEHOLD of a SLATE and SLAB QUARRY TO BE DISPOSED OF. It has been worked for upwards of 23 years; 62 years of the lease are yet unexpired. The sett contains about 1500 acres, and on several parts thereof indications of slate rock are exhibited.—Particulars, and the reports of the ablest quarry conductors of North Wales, will be given on application to W. T. OWEN, Llandderfel, Corwen, North Wales.

VALUABLE MINERALS TO LET, ON LOCHFYNE.—1. SPATHOSE ORE, 30 to 38 per cent.; HEMATITE, 40 to 50 per cent.; veins 12 to 40 ft. wide, and only 500 yards to shipping port.—2. YELLOW and PEACOCK COPPER in extensive veins; on the ground 50 tons quarried, and 25 tons crushed.—3. SULPHUR ORES, 40 to 60 per cent., with 3 to 6 per cent. copper, in some lead.—4. ARGENTIFEROUS ORES, assay 196 ozs. silver.—5. BLENDE and LEAD of great richness. Inspection solicited by W. FORLONG, of Erins, proprietor.

ON SALE, NEW HORIZONTAL HIGH PRESSURE STEAM ENGINES:—One 30 in. cylinder, 5 ft. stroke, Cornish valves, for winding and pumping, or for both; one 24 in. cylinder, 4 ft. stroke. Also, 20 in., 18 in., 16 in., 14 in., and 12 in. cylinder engines, with 3 ft. stroke; 14 and 12 in. of 2 ft. stroke, and 8 and 10 in. of 18 in. stroke. Those which are not actually completed are in a very forward state.—R. J. and E. COUPE, Clayton Foundry, Wigan.

SAMUEL GRIFFITHS' STAFFORDSHIRE IRON TRADE CIRCULAR. Published every Saturday afternoon. Circulation, 7000 per week. Price £1 1s. per annum, in advance, post free, being registered for transmission abroad at same price.

The IRON CIRCULAR gives the state of the Market with respect to Pig and Malleable Iron; the Official Prices of Bars, Hoops, Sheets, and most other kinds of Staffordshire Iron; a Report of the Iron Trade throughout England, Scotland, and Wales; the Scotch Pig Market up to the close of the market on the day of publication; the Closing Price of the Funds and the principal Railway Stocks up to two o'clock the same day; a Monthly Report of the Iron Trade in France; a Weekly Report of the Money Market, London Discount Market, state of the Foreign Exchanges; the Weekly Return of the Bank of England; the Monthly Return of the Bank of France; a correct Weekly Account of all the Gold Ships at Sea, London bound; likewise an accurate Weekly Return of all the Gold and Specie received during the week; a Report of the Copper Market, with prices of all kinds; a Report of the Tin Market, with present prices, and the same of Lead and Spelter, every week. The IRON CIRCULAR likewise contains an account of all Failures, Dissolutions of Partnerships, Changes in Firms, Stoppage of Works, Works Recommencing, New Works, or those in course of erection; in a word, the CIRCULAR gives every information connected with the Iron Trade which Mr. GRIFFITHS, whose well-known connection with it, considers would be useful and acceptable to the Ironmaster, the Merchant, the Shipper, Banker, or any other Buyer of Iron. The same may be said with regard to Copper, Tin, Spelter, and Lead. A Tabular Statement will be published with the CIRCULAR every three months, showing the number of Furnaces in and out of blast in all the Iron Districts, the quantity of Iron made, and likewise the quantities of Coal and Ironstone consumed in its production.

Parties wishing to subscribe will send a post-office order, addressed to S. GRIFFITHS, Metal Broker, Wolverhampton, which will include the cost post free to end of this year.

BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK of SECOND-HAND MINING MATERIALS FOR SALE, including ironwork for a water-wheel, 40 ft. diameter, 2½ ft. breast. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description. 98

IMPROVED APPLICATION OF WATER POWER.

THE TURBINE.—MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for 13 years, with complete success, in MANUFACTURING their IMPROVED TURBINES, and can recommend them with confidence. This machine is applicable to all practicable heights of falls and quantities of water, giving a much higher percentage of power than any other description of water-wheel. On low falls it has the additional advantage of not being affected by flood or back-water, and it is particularly well adapted for all falls where the quantity of water is variable.

Further particulars on application; also references to turbines now at work on a great variety of falls. 99

FITZMAURICE PURE GAS LIGHT WORKS (large and small) continue SATISFACTORILY FITTED in many noblemen's MANSIONS, TOWNS, COTTAGES, FARMS, FACTORIES, SHIPS, and MINES. The same retort makes either oil gas or coal gas. Oil gas is brilliant, pure, detectable in odour, and free from sulphur. (See "Cottage Gas Works," 6d., Hebert, Cheapside). Complete moveable gas works, with gasometer, for 5 lights, £24; 20 lights, £75; 100 lights, £230; larger works in reduced proportion. Gas fitting done, chandeliers made or altered. Factory, 44, St. John's-square, Clerkenwell. JAMES COPCUTT, manager. Nothing to do with the Lime Light Company. 100

PATENT BITUMINIZED GAS, WATER, AND DRAINAGE PIPES.—These PIPES POSSESS all the PROPERTIES NECESSARY for the CONVEYANCE of GAS and WATER, and also for DRAINAGE PURPOSES—viz., GREAT STRENGTH, GREAT DURABILITY, and PERFECT INOXIDABILITY, and being non-conductors are not affected by frost, like metal pipes. They are proved to resist a pressure of 220 lbs. on the square inch (equal to 500 ft. head of water), are only one-fourth the weight, and considerably cheaper than iron pipes. They are made in 7 ft. lengths, and the joinings are simple and inexpensive. These pipes have been in use in France, Spain, and Italy nearly three years, where the demand for them is very great. The opinions of the press on a public test at the Houses of Parliament, before a large number of engineers and other scientific gentlemen, may be had, with further particulars, at the office of the company, on application to MR. ALEX. YOUNG, 67, Mark-lane, London, where sample pipes may be obtained for trial. 101

SARL AND SONS, 17 and 18, CORNHILL, respectfully SOLICIT a VISIT to their magnificent ESTABLISHMENT. The ground floor is more particularly devoted to the display of FINE GOLD JEWELLERY, GOLD and SILVER WATCHES, and FINE GOLD CHAINS.

The SILVER PLATE DEPARTMENT is in the gallery of the building, and consists of every article requisite for the table and sideboard.

In the magnificent show-rooms is displayed a large and beautiful stock of ARGENTINE PLATE, the manufacture of which has stood the test of 20 years' experience.

SARL and SONS have also fitted up a separate show-room for the display of DRAWING and DINING ROOM CLOCKS of the most exquisite designs. Books containing drawings and prices may be had upon application.

SARL AND SONS, 17 and 18, CORNHILL, LONDON. 102

BASTIER'S PATENT CHAIN PUMP, APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
3.—It occupies a very small space.
4.—It raises water from any depth with the same facility and economy.
5.—It raises with the water, and without the slightest injury to the apparatus sand, mud, wood, stone, and every object of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or attention.

To be seen daily at W. P. Warner's, wine and spirit merchant, Welsh Harp, Edgware-road, near Cricklewood. References of the highest character will be given.

J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors and others, for the USE of his INVENTION.

OFFICES, 19, MANCHESTER BUILDINGS, WESTMINSTER, LONDON. 103
London, Oct. 10, 1859. Hours, from Ten till Four. J. U. BASTIER, C.E.

AYTOUN'S PATENT SAFETY CAGE FOR MINES.

SAFETY FOR THE MINER.—An accident occurred at one of the pits belonging to Earl Granville, at Star Green, Hanley Potteries, by which ten men were killed and other ten severely injured. At Half-past Two a "cage," containing fourteen men, was being drawn up the shaft of the "big pit," while another cage with six or seven men in it was going down at the same time. As the ascending cage drew near the surface the signal-bell in the engine-room sounded as usual, in order that the engine might be at once stopped. The engine-tender was, however, too late in attending to his signal, and the consequence was that one cage was drawn up beyond its proper point, while the other went to the bottom of the shaft with a heavy shock. The ascending cage was drawn up till it reached the wheel over which the rope attached to it worked, and was being taken round, when the whole fourteen men, with one exception, were precipitated beneath; six fell down the shaft, and were dashed to pieces; three fell on the pavement at the pit's mouth, and one on the iron pavement, and was killed on the spot; four who were thrown on the ground received fearful injuries. The occupants of the descending cage were all more or less injured by their fall, but none of them were killed. We have over and over again drawn the attention of mine proprietors and viewers to the imperative necessity of adopting means, now proved to be wholly effectual, for the prevention of lamentable accidents like this. Will colliery owners never listen to the pleading voice on behalf of the poor miners, which tells them that over-winding need never occur? In the present case of Earl Granville's pit, had such a disengaging catch and safety cage as is shown in our plate 232, for December, 1858, been fitted up, the most careless engine man could not have brought about any casuality whatever. The apparatus to which we have referred is that invented by Mr. R. Aytoun, of 3, Fettes-row, Edinburgh, and we quote it as being the most recent successful attempt at a safety cage.—*Practical Mechanics' Journal*, January, 1860.

FRIGHTFUL COLLIERY ACCIDENT.—An appalling occurrence happened near Wolverhampton on Saturday morning, which resulted in the instant death of seven persons. At a little before Six o'clock the colliers at the Blue Fly Pit, at the Wednesfield Heath Colliery of Mr. H. B. Whitehouse, assembled around the pit's mouth to descend to their work, down a shaft nearly 100 yards in depth. During the previous night the engine had been used in drawing water from the pit, and on Saturday morning the night engine-tender had left duty, and the engine-tender for the day had taken the engine in charge. On passing each other, the engine-tender who was going off duty said to his successor, "It's all right." Presuming upon the supposed truthfulness of the statement, the day engine-tender went confidently into the engine-house, and the colliers received the customary signal to jump into the skip; four men and three boys obeyed the signal, the engine was set in motion, and the skip raised a few inches from the wagon or platform that on such occasions forms the temporary covering to the mouth of the shaft, and the wagon was drawn away to allow the skip to descend. The engine had been scarcely reversed before it was found that the drum upon which the wire-rope that held the skip was coiled had been imperfectly connected with the engine. In no way held in check, therefore, it began to revolve with great rapidity, and in an instant the men and boys in the skip were literally dashed to atoms at the bottom of the shaft.—*Scotsman*, January 24, 1860.

These two accidents are given for the consideration of those who believe that safety cages are unnecessary where attention is paid to the state of the rope. In neither of these cases were the casualties owing to any deficiency in the rope or gearing, and yet seventeen lives have been sacrificed, not one of which would have been lost had a safety cage with its disengaging catch been in use.

DESCRIPTION OF CAGE.

The only novelty in this cage lies in the upper slides, or shoes, and their appendages. These slides, or shoes, B C, are two in number; but being placed on opposite sides of the cage, only one of them can be seen in the drawing. Each of these slides has a single bolt, or stud, B, by which it is attached to the cage, and around which it turns; a long arm, A B, to the extremity of which the winding chain is attached; a stop, H, which prevents the arm from being pulled above the horizontal line; and a spring, E F, which lowers it when the winding chain is slack.

From this description it is easily seen that, in the event of the rope or gearing giving way, as in Fig. 2, the springs, E F, so tilt the shoes, or slides, B C, that they immediately seize hold of the guide rods in the same manner as a boring key in the hands of a miner lays hold of the boring rods, and with the same tenacity of grip; and although the rope should come down on the top of the cage, the only effect would be to cause the shoes to dig deeper into the guide rods, and thus to make the hold more secure. The means of arresting the cage in its descent being thus provided, there need be no hesitation in adopting the "disengaging catch," whereby, in a case of over-winding, the rope is let go and the cage remains safely suspended from the guide rods.

It may be mentioned that the safety apparatus costs little money, can be fitted to existing cages, and is alike applicable to guide rods of iron or wood. Moreover, when brought into action it does not injure the guide rods, and, consequently, after an accident, in which lives and property may have been saved, the winding may be proceeded with almost immediately.

To ensure the speedy adoption of this invention, the license fee for a single cage, during the existence of the patent right, has been limited for the present to £1.

For licenses, reference to parties who use the cage, or further information, application may be made to ROBERT AYTOUN, 3, Fettes-row, Edinburgh. 104

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS, IN STOCK—FOR SALE OR HIRE. 105

RAILWAY WAGONS.—JONATHAN KETLEY, SOHO CARRIAGE AND WAGON WORKS, NEAR BIRMINGHAM.
ALL DESCRIPTIONS OF RAILWAY WAGONS FOR SALE OR HIRE.
MANUFACTURER OF ALL KINDS OF RAILWAY IRONWORK. 106

THE RAILWAY CARRIAGE COMPANY, OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.
NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE.
LONDON OFFICES,—34, GREAT GEORGE STREET, WESTMINSTER. 107

THE BIRMINGHAM WAGON COMPANY (LIMITED) HAS RAILWAY WAGONS FOR HIRE.
Apply to the SECRETARY, 3, Newhall-street, Birmingham. 108

PERMANENT WAY RAILS for sidings, &c., COLLIERY RAILS, CONTRACTORS' RAILS, EARTH WAGONS, and CONTRACTORS' MATERIALS FOR SALE, by ROBERT WRIGHTSON, Newport, Monmouthshire. 109

JAMES RUSSELL AND SONS, CROWN TUBE WORKS, WEDNESBURY, STAFFORDSHIRE.
WAREHOUSE,—81, UPPER GROUND STREET, BLACKFRIARS, LONDON, S.
The Original Inventors and First Manufacturers of the Patent Wrought-Iron Tubes for Gas, Steam, Water, &c. Enamelled Tubing, and Glazed ditto. Russell and Howell's Homogeneous Tubes. And agents for G. F. Muntz's Solid Brass Tubes. Every variety of fittings. Trade mark, [crown] 110

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MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS.
IMPROVED HOMOGENEOUS METAL TUBES.
ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANISED AND ENAMELLED.
GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c. 111

SHORTRIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS of HOWELL'S PATENT HOMOGENEOUS METAL PLATES for BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING the STRENGTH of STEEL with the MALLEABILITY of COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. MCCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTRIDGE, HOWELL, and Co., Hartford Steel Works, Sheffield; or Messrs. HARVEY and Co., 12, Haymarket, London. 112

ROBERT MUSHET'S CAST STEEL.—The BEST and therefore the CHEAPEST in the market. ESPECIALLY SUITED for MINING PURPOSES. See testimonials at foot:—

Gloucester, Dec. 31, 1859.—GENTLEMEN: I have found the cast-steel bars very hard to groove, and had it not been for the excellent tool steel you sent me I must have given up the work in despair. Yours truly, WILLIAM HARRIS.
Robert Mushet and Co., Forest Steel Works, Coleford.

Dos Works, Newport, Monmouthshire, Feb. 4, 1860.—GENTLEMEN: In reply to your enquires of yesterday, your cast-steel sledges have worn uncommonly well, and are all that can be desired. Your obedient servants, J. J. CORDES AND CO.
Robert Mushet and Co., Coleford.

Hematite Iron Ore Mines, Whitehaven, April 2, 1860.—GENTLEMEN: Having now used your cast-steel for jumpers in my mines for more than 12 months past, I am happy to inform you that I find it very superior to any other steel we have used for mining purposes. Your obedient servant, A. HODGETTS, Manager.
R. Mushet and Co., Forest Steel Works, Coleford. (for J. W. Smith.)

For terms, &c., apply to ROBERT MUSHET and Co., Forest Steel Works, near Coleford, Gloucestershire. 113

FARRAR'S PATENT STEEL COMPANY, WARDSEND STEEL WORKS, SHEFFIELD, MANUFACTURERS of BEST CAST STEEL, MALLEABLE and MILD STEEL CASTINGS, SUPERIOR CAST-STEEL FILES, &c., CALL the ATTENTION of ENGINEERS and all users of FIRST-CLASS STEEL to the GREAT SUPERIORITY of STEEL MANUFACTURED under this PATENT. Prices:—

First quality	£50 per ton.
Second quality	40 "
Third quality	30 "

FARRAR'S PATENT STEEL CO. TRADE MARK.
Manufactory, Wardsend Steel Works, SHEFFIELD.
LONDON OFFICE, 21, BOW LANE, CANNON STREET WEST, E.C., Where all communications are to be addressed. 114

BRITISH CHARCOAL PIG IRON. COLD BLAST HEMATITE PIG IRON. URAL IRONWORKS, No. 626, GARSCUBE ROAD, GLASGOW. 115

BEST CHARCOAL IRON AND STEEL WIRE ROPES, FOR COLLIERIES, MINES, &c.
COPPER ROPE LIGHTNING CONDUCTORS, with fittings complete.
WEIGHING MACHINES and WEIGH BRIDGES.
GALVANISED CORRUGATED IRON ROOFS, and IRON BUILDINGS.
Reduced price list, with estimate and designs, forwarded on application to FRANCIS MORTON AND CO.,
MANUFACTORY AND HEAD OFFICES,—LIVERPOOL.
LONDON OFFICE,—19, PARLIAMENT STREET, WESTMINSTER. 116

GARNOCK, BIBBY, AND CO., MANUFACTURERS OF HEMP AND MANILLA CORDAGE, AND IMPROVED PATENT NON-TWISTED WIRE-ROPE, CHAPEL STREET, LIVERPOOL.

G. B. & Co. beg to intimate that they use nothing but Bradley's long-drawn charcoal wire in the manufacture of pit and incline ropes. The quality of this article is well-known, and its superiority was fully proved at a PUBLIC TEST of WIRE ROPE, instituted by Messrs. R. S. Newall and Co., at Liverpool, on October 29th, 1860, on which occasion G. B. and Co.'s samples averaged 13 per cent. over their trade card, and were the strongest of all the samples from various manufacturers then tested.—See *Mining Journal*, Oct. 29, 1860. 117

VENTILATION OF MINES.—ELLIS LEVER INVITES the ATTENTION of OWNERS, VIEWERS, and MANAGERS of COLLIERIES to his recently IMPROVED MATERIAL for BRATTICING and MAKING TRAP DOORS, in the working of coal mines. It is made in every width, and in various qualities, prices of which may be had on application.

For the VENTILATION of SHAFTS, and for CONVEYING AIR to the various UNDERGROUND WORKINGS of MINES, ELLIS LEVER has contrived and introduced a VERY SERVICEABLE DESCRIPTION of WATER-PROOF and AIR-PROOF TUBES, from 1 to 6 ft. diameter, and in unlimited lengths.

Further information may be had on application to the manufacturer, ELLIS LEVER, West Gorton Works, Manchester. 118

"THE RAILWAY AND THE MINE."—LEVER'S Illustrated Year-Book for 1861, price 2s. 6d., may be had in London of Simpkin, Marshall, and Co., and all booksellers throughout the kingdom.

TO COLLIERY PROPRIETORS.—PATENT TIPPING MACHINES, TO DIMINISH THE LOSS FROM BREAKAGE IN LOADING COAL ON RAILWAY WAGONS, SHIPS, &c.
ARTHUR AND JAMES RIGG, PATENTEES AND MAKERS, GEORGE STREET, CHESTER. 119

PATENT SAFETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH DAVEY, and PRYOR who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which, being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address,—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall. 120

PATENT LEVER BREAK, FOR RAILWAY WAGONS, doing away with the objectionable break rack. Can be APPLIED to EXISTING STOCK at a TRIFLING EXPENSE. Royalty moderate. Models can be seen at 34, Great George-street, Westminster; and the breaks in action at the works of the Railway Carriage Company; at the Peterboro' Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taff Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent. 121

INCRUSTATION OF STEAM BOILERS.—EASTON'S PATENT BOILER FLUID EFFECTUALLY REMOVES and PREVENTS INCRUSTATION in STEAM BOILERS, WITHOUT INJURY to the METAL, with GREAT SAVING in FUEL, and with LESS LIABILITY to ACCIDENT from EXPLOSION. It is used by Her Majesty's Steam Storeships, Woolwich Arsenal, Honourable Corporation of Trinity House, Tower of London, by the principal Steam Packet Companies of London, Liverpool, Southampton, Hull, &c., and by engineers and manufacturers throughout the country. Testimonials from eminent engineers, boiler makers, and manufacturers, with full particulars, will be forwarded on application to P. S. EASTON and G. SPRINGFIELD, sole manufacturers and patentees, Nos. 37, 38, and 39, Wapping-wall, London, E.

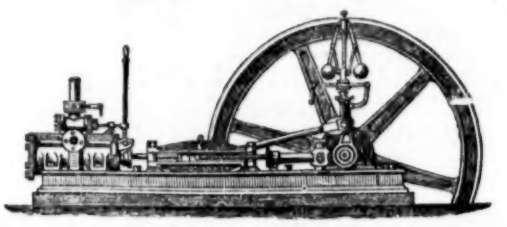
AGENTS:—Liverpool, Mr. J. McInnes; Hull, Messrs. A. H. Fleming and Co.; Southampton, Mr. J. Clark; Birmingham, Mr. Adam Dixon; Belfast, Mr. W. T. Matier, C.E.; Nottingham, Mr. G. D. Hughes; Glasgow, Mr. W. Mutrie.—Foreign: Rio de Janeiro, Messrs. Miers Brothers and Maylor; Odessa and South Russia, Mr. W. Baxter; Hamburg, M. August Möller.

Mr. Easton has rendered steam navigation a decided service. If his fluid only effects a part of what is said in his testimonials, then it is worth a trial by every steamship owner in the world.—*Mitchell's Steam Shipping Journal*, Dec. 28, 1860.

Messrs. Easton and Springfield have patented and are now manufacturing a fluid which, although it has been subjected to the severest tests, appears to give universal satisfaction.—*Mining Journal*, Dec. 22, 1860.

The most effectual, economical, and simple preventive of incrustation known.—*Commercial Daily List*. 122

MESSRS. E. PAGE AND CO., VICTORIA WORKS, BEDFORD, AND LAURENCE POUNTNEY PLACE, CANNON STREET, LONDON MANUFACTURERS OF



HIGH PRESSURE STEAM ENGINES, from 2½ to 30 horse power, and upwards, adapted for MILLS, AGRICULTURAL, MINING, and GENERAL PURPOSES. The following sizes are ready for immediate delivery, and may be seen at any time at their London depôt:—

ONE 5 in. cylinder, 10 in. stroke.	ONE 12 in. cylinder, 36 in. stroke.
TWO 8 in. cylinder, 18 in. stroke.	ONE 14 in. cylinder, 36 in. stroke.
ONE 10 in. cylinder, 18 in. stroke.	ONE 17 in. cylinder, 36 in. stroke.
ONE 14 in. cylinder, 24 in. stroke.	TWO 20 in. cylinder, 36 in. stroke.

Prices and full particulars sent on application. 123

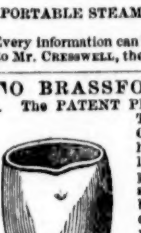
PORTABLE STEAM ENGINE COMPANY (LIMITED). CITY OFFICE, 5, ADAM'S COURT, OLD BROAD STREET. DEPOT,—92, BLACKFRIARS ROAD.

PATENT PORTABLE STEAM ENGINE, WITH REVERSING GEAR. 124

PORTABLE STEAM ENGINES LENT ON HIRE, from 4 to 25 horse power.

Every information can be obtained on application to Mr. DUNSFORD, at the City office; or to Mr. CRESSWELL, the company's engineer, at the depôt.

TO BRASSFOUNDERS, ENGINEERS, REFINERS, &c.—The PATENT PLUMBAGO CRUCIBLE COMPANY beg to CALL the ATTENTION of all users and shippers of melting pots to the GREAT SUPERIORITY of the PATENT CRUCIBLES, which have been used during the last three years by some of the largest melters in England and abroad. In addition to their capabilities of melting an average of from 35 to 40 pourings, they are unaffected by change of temperature, never crack, but can be used till worn out, requiring only one annealing for several days' work, and become heated much more rapidly than ordinary pots, EFFECTING thereby a SAVING of more than FIFTY PER CENT. in time, labour, fuel, and waste. The Patent Plumbago Crucible Company also manufacture and import clay crucibles, muffles, portable furnaces, sublimate pans and covers, glass pots, all descriptions of fire-standing goods, and every requisite for the assayer and dentist.



Also, sole proprietors of fine POWDERED PURE FLOUR PLUMBAGO, which they can confidently recommend for anti-friction purposes, being an impalpable powder, and warranted perfectly free from grit and any impurity. For ordinary polishing purposes it will be found superior to any of the black leads offered. Price, £27 10s. per ton; 30s. per cwt. Samples of 28 lbs. forwarded on receipt of 8s. Packages free.

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SLIDE AND CENTRE LATHES, PLANING, SHAPING, BORING, DRILLING SCREWING, WHEEL CUTTING, AND OTHER MACHINES.

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Conducted by MITCHELL and RICKARD (late John Mitchell, F.C.S., Author of *Manual of Practical Assaying*, Metallurgical Papers, &c.)

Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c.

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EBONITE!—TELEGRAPH INSULATORS made of EBONITE. EBONITE in SHEET, TUBES, and RODS, or manufactured into various articles of utility and ornament, being calculated to supersede metal, hard woods, and ivory at present in use.

INDIA RUBBER.—INDIA RUBBER STEAM PACKING in ROPE, SHEET, RINGS, &c., intended for railway and machinery appliances, unvulcanised and vulcanised.
S. W. SILVER AND CO., 3 and 4, BISHOPSGATE WITHIN, E.C. (Opposite the London Tavern).
WORKS—SILVERTOWN, ESSEX, opposite Her Majesty's Dockyards, Woolwich. 128

HALL AND WELLS, PATENTEES AND MANUFACTURERS OF SUBMARINE TELEGRAPH CORES, CABLES, &c.—TELEGRAPH CONDUCTORS INSULATED with INDIA RUBBER at £5 per mile and upwards. CORES WARRANTED to STAND the USUAL TEST for INSULATION. Further particulars as to price of cores, cables, &c., can be had on application at 60, Aldermanbury, City, E.C.; and Steam Mills, Mansfield-street, Borough-road, Southwark, S.E.

Copper wire covered with silk, cotton, or any other material, to order. 129

WILSON'S BREECH-LOADING RIFLE.—MR. THOMAS WILSON begs to CALL ATTENTION to his new BREECH-LOADING RIFLES and CARBINES, which after repeated trial are pronounced by the highest authorities to be the most simple, safe, and efficient breech-loading weapons ever introduced. All enquiries and other communications to be addressed to Messrs. Rabone Brothers, and Co., 47, Broad-street, Birmingham, who have the management of the patent, and from whom every information as to cost and other details can be obtained.

The patent rifles may be obtained through the London and Birmingham gun trades, and all respectable gun makers in the kingdom, as well as through Messrs. Rabone Brothers and Co., 47, Broad-street, Birmingham.

N.B.—All guns manufactured under this patent are viewed by the patentee, and if made correctly are marked T. W. under a small crown on the Nock's form of the barrel. 130

KEATING'S COUGH LOZENGES.—For half a century this well-known remedy for pulmonary disorders has successfully stood the test of public approval, and their usefulness has been extended to every clime and country of the civilised world. They may be found alike on the gold fields of Australia, the backwoods of America, in every important place in the East or West Indies, and in the palace of Pekin. During this long period they have withstood the pretension of numerous inferior rivals, and are now the acknowledged antidote for coughs, colds, asthma, &c.

Prepared and sold in boxes 1s. 1½d., and tins 2s. 9d. each, by THOMAS KEATING, 79, St. Paul's-churchyard, London. Retail by all druggists, &c., in the world. 131

40,000 SUFFERERS from PURE NERVOUS MIND AND HEAD COMPLAINTS, as Headache, Loss of Memory, Giddiness, Blood to the Head, Depression, Palpitation of the Heart, Unfitness for Business or Study, Sleeplessness, Fear of Insanity, or other Nervous Symptoms, after trying all advertised and other remedies without a cure, have been obliged to apply to the Rev. Dr. WILLIS MOSELEY, 18, Bloomsbury-street, Bedford-square, London, and fifty are not known to be uncured. Means of cure sent to all parts. Franked for 13 stamps, his 12 chapters on Nervous and Mental Complaints, 12th edition (new), called by Prof. Savage, Surgeon, "the best book on nervousness" (Simpkin, Marshall, and Co., publishers). 132

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000	Bedford United (copper), Tavistock†	2 6 8	5¾		11 19 6 .. 0 2 6	Dec. 1860
240	Boscean (tin), St. Just†	20 10 0	50		30 10 0 .. 1 10 0	Feb. 1861
200	Botallack (tin, copper), St. Just	91 5 0	210	200 210	443 5 0 .. 2 10 0	Feb. 1860
2000	Bronfloyd (lead), Cardiganshire [L.]	4 0 0	7⅛		0 4 0 .. 0 2 0	Jan. 1860
200	Brynford Hall (lead), Flintshire	12 10 0	26		14 0 0 .. 2 10 0	Oct. 1860
1000	Carn Brea (copper, tin), Illogan†	15 0 0	100	92½ 95	269 10 0 .. 2 0 0	Feb. 1861
2048	Carnyorth (tin), St. Just	3 10 0	3¼	2¾ 3¼	0 19 6 .. 0 2 0	Sept. 1860
50000	Connorree (copper, sulphur) [L. £1]	0 15 0	54s. 6d.	54s. 6d.	0 0 9 .. 0 0 9	July, 1860
12000	Copper Miners of England	25 0 0	25		7½ per cent.	Half-yrly.
350000	Ditto ditto (stock)	100 0 0	24		1 per cent.	Half-yrly.
1055	Craddock Moor (copper), St. Cleer*	8 0 0	27½		4 19 0 .. 0 4 0	Jan. 1861
867	Cwm Erfin (lead) Cardiganshire	7 10 0	12		3 13 0 .. 0 15 0	Jan. 1861
128	Cwmystwith (lead), Cardiganshire*	60 0 0	240		217 10 0 .. 5 0 0	Jan. 1861
280	Derwent Mines (sil.-lead), Durham	300 0 0	180		137 0 0 .. 10 0 0	June, 1860
1024	Devon Gt. Con. (cop.), Tavist.* [S.E.]	1 0 0	355	350 360	739 0 0 .. 7 0 0	Jan. 1861
358	Dolcoath (copper, tin), Camborne*	128 17 6	500		610 10 0 .. 9 0 0	Feb. 1861
512	East Basset (cop.), Redruth [S.E.]	29 10 0	100	95 100	72 0 0 .. 5 0 0	Jan. 1861
6144	East Caradon (copper), St. Cleer [S.E.]	2 14 6	15⅛	15½ 16	0 2 6 .. 0 2 6	Nov. 1860
300	East Darren (lead), Cardiganshire*	62 0 0	67		74 10 0 .. 1 0 0	Jan. 1861
2048	East Wheal Lovell (tin), Wendron	2 10 0	—		0 5 0 .. 0 5 0	July, 1859
1400	Eyam Mining Co. (lead), Derbyshire	5 0 0	38		19 13 4 .. 1 0 0	Dec. 1859
4940	Fowey Consols (copper), Tywardreath	4 0 0	5		41 9 3 .. 0 2 6	June, 1860
2560	Foxdale, Isle of Man, Limited (lead)†	25 0 0	35		61 8 3 .. 1 0 0	Dec. 1860
5000	Frank Mills (lead), Devon	3 18 6	4⅛		0 2 6 .. 0 2 6	Jan. 1861
486	Grambler and St. Aubyn (cop.) [S.E.]	46 10 0	22½	21 23	23 0 0 .. 1 0 0	July, 1860
6000	Great South Tolgus [S.E.], Redruth*	0 14 6	8	7 7⅛	7 13 6 .. 0 5 0	Feb. 1861
1798	Great Wheal Fortune, Breage	18 6 0	11		0 10 0 .. 0 10 0	Mar. 1860
1024	Herodsfoot (ld.), near Liskeard [S.E.]	8 10 0	37	34 36	12 10 0 .. 1 15 0	Feb. 1861
200	Herward United (lead), Flintshire	37 0 0	31		3 0 0 .. 1 10 0	July, 1860
1000	Hibernian Mine Company	92 6 2	—		6 15 0 .. 0 15 0	Feb. 1861
160	Levant (copper, tin), St. Just	2 10 0	140		1091 0 0 .. 5 0 0	May, 1860
400	Lisburne (lead), Cardiganshire, Wales*	18 15 0	125		365 10 0 .. 3 0 0	Feb. 1861
9000	Marke Valley (copper), Caradon	4 10 6	6⅛	6⅛ 6⅜	0 11 0 .. 0 3 0	Nov. 1860
5000	Mendip Hills (lead) [L.], Somerset	3 15 0	1¾		1 18 6 .. 0 5 0	May, 1859
1800	Minera Mining Co. [L.], (ld.), Wrexham	25 0 0	180		66 15 9 .. 3 17 6	Feb. 1861
20000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	14	14⅛	14 0 11 .. 0 4 10	Jan. 1860
640	Mount Pleasant, Mold	4 0 0	—		11 15 7 .. 0 12 0	Nov. 1860
6000	North Great Work, Breage	1 0 0	4⅛		0 2 0 .. 0 2 0	May, 1860
5000	Orsedd (lead), Flintshire	0 0 8	1¼		0 5 9 .. 0 0 9	Jan. 1861
6400	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	10	9¼ 9¾	35 19 6 .. 0 5 0	Mar. 1861
200	Parys Mines (copper), Anglesey [L.]	50 0 0	—		5 0 0 .. 5 0 0	Jan. 1860
200	Phœnix (copper, tin), Linkinghorne	100 0 0	435		394 10 0 .. 50 0 0	Nov. 1860
1772	Polberro (tin), St. Agnes	—	5		5 14 6 .. 0 10 0	Nov. 1860
1120	Providence (tin), Uny Lelant† [S.E.]	10 6 7	40	38 40	58 15 0 .. 1 0 0	Feb. 1861
16	Rhosesmor	50 0 0	—		1250 0 0 .. 100 0 0	—
512	Rosewarne United (cop., tin), Gwinear	15 0 0	23	21 23	33 10 0 .. 1 0 0	Sept. 1860
512	South Caradon (cop.), St. Cleer* [S.E.]	1 5 0	305	300 310	336 0 0 .. 5 0 0	Jan. 1861
512	South Tolgus (cop.), Redruth, Cornwall*	8 0 0	50		101 10 0 .. 1 10 0	Jan. 1861
496	South Wheal Frances, Illogan* [S.E.]	18 18 9	185	180 185	353 5 0 .. 1 10 0	Mar. 1861
280	Spearne Moor (tin, copper), St. Just	31 17 9	30		8 15 0 .. 1 10 0	Mar. 1861
910	St. Ives Consols (tin), St. Ives†	8 0 0	40		483 5 0 .. 1 0 0	Feb. 1861
9600	Tamar Con. (sil.-ld.), Beeralston [S.E.]	4 10 0	2⅝	2⅛ 2⅜	5 6 0 .. 0 2 6	Jan. 1861
6000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0	6	5⅝ 5⅞	10 8 6 .. 0 5 0	Feb. 1861
6000	Tolvadden (copper), Marazion	—	3⅛		0 13 6 .. 0 3 0	Mar. 1860
572	Trelyon Consols (tin), St. Ives	11 10 0	15	13 15	7 0 0 .. 0 10 0	Sept. 1860
200	Trumpet Consols (tin), near Helston	57 10 0	72½		46 0 0 .. 2 0 0	Nov. 1860
400	United Mines (copper), Gwennap	40 0 0	75		80 5 0 .. 2 10 0	April, 1860
1024	Wendron Consols (tin), Wendron	11 13 10	21	18 20	8 15 0 .. 1 0 0	Jan. 1861
6000	West Basset (copper), Illogan [S.E.]	1 10 0	18	17 18	20 12 0 .. 0 10 0	Jan. 1861
60	West Burton Gill (lead), Yorkshire	50 0 0	—		11 10 0 .. 3 0 0	Oct. 1860
1024	West Caradon (cop.), Liskeard [S.E.]*	5 0 0	82½	79 81	92 1 3 .. 2 10 0	Nov. 1860
256	West Damsel (copper), Gwennap	37 0 0	62		45 0 0 .. 1 0 0	May, 1860
6400	West Fowey Consols (tin and copper)	7 10 0	5		0 12 0 .. 0 3 0	Jan. 1861
400	W. Wh. Seton (cop.), Camborne [S.E.]*	47 10 0	360	350 355	288 0 0 .. 10 0 0	Feb. 1861
512	Wheal Basset (copper), Illogan* [S.E.]	5 2 6	110	107½ 112½	566 10 0 .. 3 0 0	Feb. 1861
256	Wheal Buller (cop.), Redruth* [S.E.]	5 0 0	120	117½ 122½	925 0 0 .. 2 0 0	Jan. 1861
500	Wheal Clifford (cop.), Gwennap [S.E.]	—	185	180 190	84 10 0 .. 4 0 0	Feb. 1861
2300	Wheal Falmouth and Sperries	2 5 0	8	7 8	0 10 0 .. 0 10 0	Feb. 1861
128	Wheal Friendship (copper), Devon	50 0 0	90		2400 10 0 .. 5 0 0	Feb. 1861
512	Wheal Jane (silver-lead), Kea	3 10 0	18		10 10 0 .. 1 0 0	Feb. 1860
5000	Wheal Kitty (tin), St. Agnes	4 10 0	1⅛		0 18 6 .. 0 2 0	July, 1860
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	1 7 2	13½	12¼ 13¼	8 0 0 .. 0 10 0	Sept. 1860
4800	Wheal Ludcott (lead), St. Ive	2 10 8	4	3⅜ 3⅞	1 4 0 .. 0 4 0	Dec. 1860
896	Wh. Margaret (tin), Uny Lel. [S.E.]†	9 17 6	47½	46 48	66 10 0 .. 1 10 0	Feb. 1861
100	Wheal Mary (tin), Lelant	36 2 6	440		280 5 0 .. 7 0 0	June, 1860
1024	Wh. Mary Ann (ld.), Menheniot [S.E.]†	8 0 0	20	18 20	52 17 6 .. 1 0 0	Dec. 1860
80	Wheal Owles, St. Just, Cornwall	70 0 0	300		270 13 0 .. 7 10 0	Feb. 1861
1040	Wh. Trelawny (sil.-ld.), Liskeard [S.E.]†	4 7 0	14	13 14	43 15 0 .. 1 0 0	Oct. 1860
5000	Wicklow (copper) [L.], Wicklow	5 0 0	72½		39 5 0 .. 2 12 6	Sept. 1860

[* Dividends paid every two months. † Dividends paid every three months.]

MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
700	Aberdovey (silver-lead), Merioneth	1 10 0	30		0 10 0 .. 0 10 0	Mar. 1859
5120	Alfred Consols (cop.), Phillack [S.E.]	2 11 10	3⅛	2⅞ 3⅛	20 3 0 .. 0 2 6	April, 1859
1624	Balleswidden (tin), St. Just	11 5 0	12		12 5 0 .. 0 5 0	Jan. 1854
1200	Brightside & Froggatt Grove, Derbysh.	3 0 0	3⅛		3 0 0 .. 3 0 0	April, 1856
200	Cefn Cwm Brwyno (lead), Cardigansh.	28 0 0	20		5 0 0 .. 2 0 0	Mar. 1858
2500	Central Minera (lead) [L. £5]	0 15 0	5⅛		0 4 0 .. 0 4 0	Sept. 1859
6000	Charlotte United, Perranuthnoe	1 16 2	21s.		0 13 0 .. 0 1 6	Sept. 1859
2000	Collacombe (copper), Lamerton	5 0 0	12		3 5 0 .. 0 8 0	Dec. 1857
256	Condurrow (cop., tin), Camborne	20 0 0	90	80 85	85 0 0 .. 2 0 0	June, 1857
256	Copper Hill (copper) Redruth	48 0 0	92½		2 10 0 .. 2 10 0	Sept. 1859
4076	Devon and Cornwall (copper)	4 16 3	6		0 10 0 .. 0 2 6	Feb. 1859
672	Ding Dong (tin), Gulval	37 14 0	15	14 15	16 7 6 .. 1 10 0	Mar. 1857
12800	Drake Walls (tin, copper), Calstock	2 1 0	1	⅞ 1⅛	0 13 6 .. 0 2 0	Sept. 1857
2048	East Falmouth (sil.-ld.), Kenwyn, Kea	2 7 6	2⅛		0 7 6 .. 0 2 6	Jan. 1858
128	East Pool (tin, copper), Pool, Illogan	24 5 0	400		305 0 0 .. 2 10 0	Aug. 1858
1024	East Wheal Margaret (tin, copper)	11 17 6	6		0 5 0 .. 0 5 0	Jan. 1854
5700	Exmouth (silver-lead), Christow	5 4 0	8		4 0 0 .. 0 2 6	Jan. 1860
6000	General Mining Co. for Irel. (cop., ld.)	4 0 0	5⅛	5¾	1 0 8 .. 0 3 3	June, 1853
119	Great Work (tin), Germoe	100 0 0	110		221 10 0 .. 7 10 0	Feb. 1857
6000	Hingston Down Con. (cop.), Cals. [S.E.]	4 15 6	2⅛	1⅞ 2⅛	2 16 0 .. 0 2 6	Nov. 1856
5000	Kelly Bray (lead, copper), Callington	4 1 6	1⅛		0 6 0 .. 0 2 0	Feb. 1860
20	Laxey Mining Company, Isle of Man	100 0 0	1200		1420 0 0 .. 50 0 0	June, 1857
5000	Lewis Mines (tin, copper), St. Erth	6 9 11	1	¼ ⅛	0 10 0 .. 0 10 0	Dec. 1855
470	Newtownards Mining Co., Co. Down	50 0 0	35		56 0 0 .. 1 0 0	Sept. 1858
5000	North Dolcoath (copper), Camborne	1 19 6	⅞		0 5 0 .. 0 2 6	June, 1859
700	North Roskear (copper), Camborne	16 0 0	24	20 22	157 0 0 .. 4 0 0	Sept. 1853
1024	Rosewarne and Herland United	10 10 0	¾	½ ⅝	2 10 0 .. 0 10 0	Oct. 1859
12000	Sortridge Con. (cop.), Whitchurch [S.E.]	0 14 0	13s.	11s. 13s.	0 10 0 .. 0 2 6	July, 1857
128	South Crinnis (copper), St. Austell	19 0 0	285		60 0 0 .. 20 0 0	June, 1855
20000	St. Day United (tin and cop.), Redruth	2 5 0	¾		0 3 6 .. 0 1 0	Feb. 1858
120	Tretheilan (cop.), Gwennap, Cornwall	15 10 0	15		403 13 6 .. 2 10 0	April, 1851
20000	Vale of Towy (lead), Carmarthen [S.E.]	0 13 6	9s.	8s. 9s.	0 5 9 .. 0 1 0	July, 1858
1024	West Providence (tin), St. Erth	14 15 0	3⅜		33 1 9 .. 0 10 0	April, 1857
6140	Wheal Arthur (copper), Calstock	3 7 0	4s.		1 6 0 .. 0 0 0	Oct. 1855
240	Wheal Bal (tin), St. Just	15 0 0	16		4 0 0 .. 1 0 0	Feb. 1859
4096	Wheal Edward (cop.), Calstock [S.E.]	7 5 0	2⅞		0 5 0 .. 0 5 0	Mar. 1858
1024	Wheal Grylls (tin), Perranuthnoe	1 4 0	5⅛		1 12 0 .. 0 7 6	Nov. 1859
430	Wheal Lovel (tin), Wendron	33 0 0	7		31 0 0 .. 1 0 0	Sept. 1856
1024	Wheal Margery (tin, copper)	15 3 0	8¼		0 10 0 .. 0 10 0	May, 1860
396	Wheal Seton (tin, copper), Camborne	58 10 0	95	87½ 92½	131 15 0 .. 1 10 0	Dec. 1859
1022	Wheal Tremayne (tin, cop.), Gwinear	12 2 6	5		10 2 6 .. 0 7 6	Jan. 1854
4096	Wheal Wrey Consols (lead), St. Ive	2 14 0	⅝	⅛ ⅝	2 12 6 .. 0 2 6	Dec. 1857

FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
2464	Burra Burra (cop.), South Australia	5 0 0	127	127 x d	215 0 0 .. 5 0 0	Nov. 1860
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	41	40 41	96 12 0 .. 2 0 0	Jan. 1861
10000	Copiapo Mining Company, Chili [S.E.]	16 0 0	10	8 10	6 8 0 .. 0 5 0	Jan. 1861
16000	East Indian Coal, Calcutta [L.]	10 0 0	10		7½ per cent.	Yearly.
70000	English and Australian [S.E.]	5 0 0	3⅝	3¼ 3⅝	1 2 6 .. 0 5 0	Feb. 1861
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	22	20 22	17 5 0 .. 0 15 0	Jan. 1861
68000	Kapunda Mining Co., Australia [S.E.]	1 0 0	2¼	2 2¼	0 6 0 .. 0 2 0	Dec. 1860
15000	Linares (ld.), Pozo Ancho, Spain [S.E.]	3 0 0	10	9 10	7 16 2 .. 0 6 8	Sept. 1860
10000	Lusitanian (of Portugal) [S.E.]	2 0 0	2¼	2 2¼	0 17 3 .. 0 2 6	Aug. 1860
103815	Mariquita and New Granada [S.E.]	1 0 0	⅛	⅜ ⅛	0 9 6 .. 0 1 6	July, 1859
100000	Port Phillip (gold), Clunes [S.E.]	1 0 0	¾	⅝ ¾	0 3 0 .. 0 1 0	Jan. 1860
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	32	30 31	40 15 0 .. 2 0 0	Dec. 1860
20000	West Canada Mining Company [L.]	1 0 0	1¼	1¼	0 2 0 .. 0 2 0	June, 1860

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
10000	Alten and Quænangen Uni. (cop.) [L. £5]	4 10 0	3		4 5 0 .. 0 15 0	Nov. 1853
10000	Gt. Barrier Land, Min., &c., N. Ze. [L. £5]	3 10 0	3⅛	3¼	15 per cent.	May, 1859
10000	Pontgibaud (sil.-lead), France [S.E.]	20 0 0	6	4 6	1 0 0 .. 1 0 0	June, 1855
43174	Unit. Mexican (sil.), Mexico [S.E.] Av.	28 5 0	4	3¾ 4¼	1 16 6 .. 0 4 0	Feb. 1853

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
20000	Australian (copper), South Australia [S.E.]	7 7 6	1¼	1 1¼	Sept. 1858
75000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	0 17 6	⅝	⅜ ⅝	Dec. 1860
6000	Central American (silver) [L.]	5 0 0	8⅛		Feb. 1859
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	—		Jan. 1859
60000	Clarendon Consols (copper), Jamaica [S.E.]	0 17 6	⅜		Jan. 1861
10000	Copiapo Smelting [L.], Chili	10 0 0	8⅛		Fully paid.
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	¾	⅝ ¾	Fully paid.
30000	East Kongsberg Native Silver Mining Co. of Norway [L. £5]	0 10 0	12s.		Feb. 1860
30000	Ellerslie and Bardowie, Jamaica	0 18 0	1⅛		July, 1859
8000	English and Canadian Mining Company [L.]	5 0 0	—		Fully paid.
25000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	2¾	2¼ 2¾	Fully paid.
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	1 0 0	1⅛	1 1⅛	
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	—		Fully paid.
50000	Imperial Thessalian (lead, &c.), Thessaly [L. £2]	0 10 0	¾		June, 1860
30000	Lagunazo (sulphur, copper), Portugal [L. £1]	0 7 6	⅛		Mar. 1861
60000	New Granada (gold), South America [S.E.]	1 0 0	¼		Fully paid.
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	1 0 0	1		Nov. 1858
60000	North Rhine Copper of South Australia [L. £1] [S.E.]	0 12 6	⅛	⅜	June, 1860
15000	Pachuca Silver Mining Company, Mexico [L. £1]	0 5 0	1⅛		No call.
80000	Scottish Australian Mining Company [L. £1]	0 10 0	⅜	¼ ⅜	Nov. 1858
15000	South Europe Mining Company, Spain [L. £5]	3 0 0	—		May, 1860
50000	St. John's United (copper, lead), Newfoundland [L. £1]	0 10 0	⅝		Mar. 1860
25000	Victor Emanuel, Val d'Ossola, Piedmont [L.]	1 0 0	1⅛		Fully paid.
1000	Western Africa Malachite (copper) [L.]	110 0 0	—		Oct. 1859
12000	Wheal Ellen, South Australia [L. £5]	2 10 0	2¾		Nov. 1860
35425	Wheal Jamaica (copper)	1 0 0	18s.		Fully paid.
80000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	16s.	17s. 19s.	Fully paid.

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4825	Abbey Consols (ld.) Cardigan.	2 7 0	1		Nov. 1860
1000	Allt-y-Crib (lead)	1 5 0	2		
4000	Allt-y-Maen (lead) [L. £1]	0 5 0	12s.		July, 1859
10000	Angarrack (copper), Phillack.	1 1 6	1⅛		June, 1859
5000	Ashburton Consols (copper)	—	⅛		No call.
1000	Ashburton United (cop., tin)	11 10 0	15½		Mar. 1860
10000	Bampfylde (copper), Devon	0 15 0	4		Aug. 1860
4000	Bedford Consols (copper)	1 17 6	6s.	4s. 6s.	Jan. 1861
4000	Beneathwood (lead), Linkin.	1 14 6	12s.		Nov. 1860
2000	Berehaven (copper), Ireland	1 0 0	1¼		
250	Berriow Consols (lead)	17 16 0	8		July, 1860
7500	Bickleigh Vale Phœnix [L.]	2 0 0	2⅛		Fully paid.
200	Billins (lead) [L. £30]	20 0 0	22	20 22	Feb. 1861
10000	BoriaseCon. (tin), St. Just [L. £1]	1 0 0	1⅛		Fully paid.
1248	Boscaswell (tin), Penzance	6 5 0	8		Dec. 1860
2280	Boscundle (tin, cp.), St. Austell	6 15 0	4		Sept. 1860
160	Bosorne & Bollowall, St. Just	6 5 0	10		Dec. 1860
123	Bosweddan and Wheal Castle	32 0 0	—		Nov. 1858
5000	Bosworthan (tin), Sancreed	1 0 0	1⅛		June, 1860
5000	Bottle Hill (tin), Plympton	1 0 0	28s.	25s. 27s.	
12000	Brea Con. (tin), St. Ives [L. 30s.]	1 0 0	1⅛		Jan. 1861
4000	Brookwood	1 1 0	3		Jan. 1861
4000	Bryngias (lead), Cardigan	1 10 0	3		Sept. 1860
500	Bryn Gwiog (lead), Flint	4 0 0	34	31 33	Oct. 1859
2000	Bryntail, Llanidloes, Montgo.	4 18 0	5	4¼ 4¾	Dec. 1860
5850	Budnick Consols (tin), Perran	0 15 0	1		Feb. 1861
6380	Buller and Basset Unit. (cop.)	2 19 6	2		Oct. 1860
1200	Buller and Bertha (copper)	5 10 0	3	2⅛	Feb. 1861
2448	Bwlch (sil.-ld), Cardiganshire	4 9 0	1⅛		Nov. 1860
4096	Calstock Consols (copper)	5 10 0	3		Dec. 1860
915	Calvadnack, Wendron	18 5 0	5		Mar. 1861
1000	Camborne Consols (copper)	16 0 0	8		Aug. 1860
4600	Camborne Vean & Wh. Francis	6 7 4	3¼	3 3¼	Nov. 1860
914	Caradon Cons. (cop.), St. Cleer	20 5 0	12	8½	Jan. 1861
1000	Cardigan Consols [L. £10]	6 0 0	5¼		Feb. 1860
916	Cargoll (silver-lead), Newlyn	15 5 7	18⅛	17 18	Sept. 1860
4370	Carnewas (ld., cop.), Mawgan	0 18 0	—		May, 1860
3000	Carn Vivian (tin, cop., lead)	1 12 6	2⅛		Nov. 1860
1056	Carvannall (cop.), Gwennap	21 11 7	3		Dec. 1860
10000	Carway and Duffryn [L.]	5 0 0	5		Fully paid.
20000	Carysfort (cop., ld.) [L. £2½]	0 10 0	13s.		Mar. 1859
25000	Casara (lead), Carma. [L. £1]	0 8 0	9s.		Dec. 1860
7146	Catherine & Jane Cons. (lead)	1 7 0	⅝		Jan. 1861
2500	Cefn Cilcen (lead), Flintshire.	1 5 0	1¼		Sept. 1860
2000	Clara (silver-lead) [L. £4]	3 17 6	2⅛		Oct. 1860
984	Clijah & Wentworth (tin, cp.)	27 0 6	2⅛	2¼ 2⅛	Jan. 1861
6000	Clinton and Edgecombe United	1 0 0	1⅛	1 1⅛	Oct. 1860
3135	Coed Mawr Pool (lead) [L.]	4 3 0	4		July, 1860
2450	Cook's Kitchen (cop.) Illogan	17 0 9	19	17 19	May, 1860
5000	Cornubia (tin), Roche	0 10 0	¾	¾ 1	Feb. 1861
10000	Craigton (ld.) [L. £1], Kirkcud.	0 10 0	⅜		June, 1859
1024	Crane, Camborne	5 0 0	4⅛	5 5⅛	Mar. 1861
30000	Craven Moor (ld.), Yorkshire.	0 10 0	⅛	4s. 6s.	No call.
12000	Crelake (cop.), Tavistock	—	3¼		No call.
8000	Crookhaven (cop.) [L. £2½].	0 9 6	9s.		May, 1860
2000	Crowlwm (lead), Llanidloes	1 10 0	1⅛	⅞ 1	No call.
6000	Crowndale (cop.), Tavistock	0 11 0	8		Nov. 1858
6000	Cuddra (cop., tin), St. Austell	1 10 0	1¾		Feb. 1861
4000	Cumberland Black-Lead [L.]	5 0 0	5⅛		Fully paid.
7000	Cwm Afon (cp.), Festi. [L. £1]	0 19 0	—		Dec. 1860
21000	Dale, North Staffordshire [L.]	1 0 0	14s.	13s. 14s.	Fully paid.
6600	Denham Bridge (cp.), [L. 10s.]	0 6 6	3s.		Dec. 1859
4817	Devon and Courtenay (cop.)	1 7 6	11s.		Jan. 1861
4933	Devon Great Elizabeth (cop.)	1 7 0	7s.		May, 1860
12000	Dev. New Copper Co. [L. £2]	—	2		
12000	Devon Union (copper) [L. £1]	0 10 0	¾		Dec. 1860
4566	Devon Wheal Buller (copper)	3 6 6	¾		Feb. 1861
1000	Durio (tin), Lelant	5 12 0	6		Dec. 1860
2048	Dulta (tin), St. Stephen's [L. £1]	0 8 6	3		Feb. 1861
3000	Dyfngwm (lead), Wales	12 6 6	12		Sept. 1858
244	Eaglebrook (lead.), Cardigan	74 0 0	15		Mar. 1861
4096	East Alfred Consols (copper).	3 9 9	1	¾	Feb. 1861
6000	East Budnick and Mount	0 10 0	⅝		Jan. 1861
6000	East Carn Brea (cop.) Redruth	2 18 0	7½	8 8¼	Nov. 1860
6400	East Crinnis and South Par	2 1 6	2		Jan. 1861
4000	East Devon Gt. Consols (cop.)	0 9 6	3⅛		Feb. 1861
6000	East Fowey Consols (copper).	1 2 0	1⅛		June, 1860
6000	E. Grenville (cop.), Camborne	0 12 6	16s.	⅝ ¾	Jan. 1861
4000	E. Gunnis Lake & S. Bedf. (cp.)	5 7 0	¾		Dec. 1860
4096	E. Providence (tin), Uny Lel.	1 19 5	1⅜		Dec. 1860
6000	E. Releath (tin, cop.), Wendron	0 1 0	⅝		Aug. 1860
5000	E. Rosewarne (cp., tin), Gwin.	2 10 0	1⅝	31s. 33s.	May, 1860
9000	East Tamar (sl.-ld.) Beerferris	3 6 6	⅜		Feb. 1860
256	East Tolgus (copper), Redruth	56 0 0	40		Feb. 1861
1000	E. Trefusis (cop.), Gwennap.	6 18 10	4		Dec. 1859
1024	E. Treskerby (cop.), Redruth.	2 5 0	1¼		Dec. 1860
1190	E. Wheal Agar (cop.), St. Cleer	8 2 0	2⅛		Jan. 1861
6000	E. Wh. Ellen (sil.-ld.), St. Ive	0 1 0	⅜		July, 1860
4000	E. Wh. Russell, Tavis. [S.E.]	7 4 0	6⅛	6⅜ 6⅝	Nov. 1859
6000	Fowey and Par Uni., St. Blazey	0 10 0	1⅝		Nov. 1860
5000	Fursdon (cp.), Okeham. [L. 30s.]	1 5 0	2⅛		Aug. 1860
6000	Furze Hill Wood Cons., Buckl.	0 3 6	14s.		Dec. 1860
128	Garden (tin), Morvah	10 0 0	12		Dec. 1860
1000	Garreg (lead), Flint	4 1 6	⅛		Jan. 1861
4000	Gawton (copper), Tavistock	1 10 0	⅛	⅛	Feb. 1861
6000	Gernick (copper), Crowan	0 9 0	¾		Feb. 1861
4892	Goginan (silv.-ld.) [1900 £12½, 2992 £1]		2		July, 1860
6144	Gonamena (copper), St. Cleer.	2 7 6	3⅛		
2000	Goonzion, St. Neot	0 2 6	—	3s. 4s.	Feb. 1861
5000	Great Brigan	2 10 0	—	2⅛	Mar. 1861
4096	Great Caradon (cop.), St. Ive.	1 6 0	17s.		Feb. 1861
6000	Gt. Crinnis (cop.), St. Austell	2 0 0	1¼	1 1¼	Feb. 1861
10000	Great Moelwyn Slate [L. £5]	1 0 0	—		June, 1860
4000	Gt. No. Tolgus (cop)., Redruth	2 5 0	2		Jan. 1861
10104	Great Onslow Cons., Camelfd.	3 10 9	¾		Dec. 1860
6000	Gt. Retallack (sil.-ld., blende)	1 7 0	38s.	1¾ 1⅞	June, 1860
40000	Gt. Tregune Consols, Altarnun	0 10 0	⅛		
10000	Great Treveddoe (copper)	0 11 0	⅝		July, 1859
6000	Gt. Tywarnhaile (cp.), [L. £5]	3 0 0	3		Jan. 1861
5120	Great Wheal Alfred [S.E.]	13 15 2	16s.	19s. 21s.	Jan. 1861
3730	Great Wheal Baddern (tin)	4 7 0	1¼	1⅛ 1⅜	Nov. 1860
6000	Gt. Wh. Busy (cop., tin), Ken.	12 0 0	5		Jan. 1861
10000	Great Wh. Martha (cop.) [L.]	1 0 0	1		Fully paid.
5908	Gt. Wh. Vor (tin, cp.), Hls. [S.E.]	40 0 0	1⅜	1⅛ 1⅜	Dec. 1859
5000	Grosvenor [2500 £1, 2500 1s. pd.] [L. £1]		—		
5000	Gurlyn (cop., tin), St. Erth	1 0 0	8s.		Feb. 1861
8634	Gwydyr Park Con., Llanrwst	0 14 9	9s.		Jan. 1860
6400	Harwood (ld.), Durham [L. £1]	0 3 0	⅜		April, 1860
7219	Hawkmoor (tin, cop.) Calstock	2 16 0	1		Dec. 1860
5000	Holmbush (ld., cp.) Callington	5 2 0	3¼	2¾ 3¼	Sept. 1860
6000	Huckworthy Bridge (copper).	0 15 6	⅛		Dec. 1860
6000	Keswick (lead), Portinscale	4 16 0	1⅛		June, 1860
6000	Lady Bertha (cop.) [S.E.]	1 8 6	1	21s. 23s.	Feb. 1860
3000	Lady Eliza (ld.), Carm. [L. £3]	2 6 0	½		Nov. 1860
1019	Leeds & St. Aubyn (tin, cop.)	14 16 3	4		Oct. 1858
951	Lelant Cons. (tin), Uny Lelant	31 10 0	2⅛		Nov. 1860
1000	Llanfair (silver-lead)	5 0 0	5		Jan. 1861
8000	Llywernog United, Card. [L.]	1 16 0	1⅛		July, 1859
2000	Lower Park Denbighshire [L.]	4 0 0	—		
4968	Maudlin Mines [2484 £6, 2484 £1 pd.]		2⅛		
4540	Merllyn (lead), Flint	3 9 6	23s.		Jan. 1861
22000	Merryfield (lead) [L.]	0 12 0	¼		May, 1860
3400	Michell (lead), Flint	—	9s.	8s. 10s.	Mar. 1861
1024	Mill Pool (tin, cop.) St. Hilary	15 9 6	1		Aug. 1859
16000	Mold (lead), Flints. [L. £1]	0 17 0	⅞		Jan. 1860
6599	Molland (cop.), S. Moulton	2 6 0	4s.		Jan. 1861
5000	Nance Valley	0 5 0	1		Aug. 1860
1024	Nangiles (tin, copper), Kea	3 0 0	6		Jan. 1861
5000	Nanteos and Penrhiw [L. £4]	3 0 0	2¼		Sept. 1860
2400	Nant-y-Iago (ld.), Merioneth	2 10 0	2¼		No call.
250	Nanty Mines (ld.), Montgom.	20 0 0	—		Fully paid.
5000	Nant-y-Mwyn (ld.), Gla. [L. 10s.]	0 5 0	—	⅜	Jan. 1861
6400	Nether Heath (lead), Dufton	0 15 6	⅛		April, 1860
6000	New Birch Tor & Vitifer Cons.	1 6 6	2⅛		July, 1860
6400	N. Crow Hill (ld.), St. Stephen	1 18 6	1⅛		Feb. 1861
6000	N.E. Bertha Con. (cp.), Tavis.	0 13 0	⅝		Dec. 1860
6000	New Treleigh Cons., Redruth	1 8 0	2⅜	2⅜ 2⅛	Feb. 1861
2000	New Wheal Clifford (copper).	0 5 0	7s.		Nov. 1860
6144	New Wheal Francis, Crowan.	0 13 6	11s.	9s. 11s.	Feb. 1861
400	New Wh. Seton (cop.), Camb.	12 0 0	50	48 50	Nov. 1860
2300	New Wh. Vor & E. Wh. Metal	8 0 0	—		Jan. 1861
2500	N. Wh. Vaddon (cop.), Marazion	0 13 0	1¼		Dec. 1860
6000	Nidderdale (ld.), Yorks. [L. £1]	0 12 6	⅝		Sept. 1860
90	N. Budnick (tin, ld.), Perranz.	1 10 0	40		No call.
4500	No. Budnick and West Mount	0 5 0	⅜		
1024	North Buller (cop.), Redruth.	20 2 6	3⅛		Feb. 1861
6000	Nor. Clifford (cop.), Gwennap	0 5 0	½		Nov. 1860
20000	North Devon (sil.-ld.) [L. £1]	0 5 0	8s.		No call.
6000	North Downs (cop.), Redruth	2 3 4	3¾	3⅞ 4	Aug. 1859
6000	No. Downs and Wh. Rose Uni.	1 15 0	1⅜		Jan. 1861
1000	N. Fortescue (ld.), Lostwithiel	0 14 0	1		Feb. 1860
2500	North Frances, (cop.) [S.E.].	12 15 0	4¼	4 4½	Feb. 1861
1366	North Grambler, Redruth	2 7 6	7		Mar. 1860
8000	N. Hallenbeagle (tin, cp.) [L.]	0 5 0	2		Sept. 1860
2000	North Jane (tin, silver-lead).	2 0 0	2¾		Jan. 1861
6000	N. Laxey (ld.) I. of Man [3600 £2, 2400 £1⅛]		1⅛		Aug. 1860
2000	N. Levant (tin, cop.), St. Just	6 12 6	4		Aug. 1860
10000	North Minera (lead) [L.]	1 0 0	39s.	38s. 40s.	April, 1860
4096	North Rosewarne, Gwinear	0 4 6	4s. 6d.		Dec. 1860
5000	N. Trelether (sil., cp.), Padstow	1 0 0	1¼		Feb. 1860
848	N. Treskerby (cop.), St. Agnes	10 3 9	34	29 31	Dec. 1860
6000	N. Wh. Basset (cop., tin) [S.E.]	1 8 0	8	7¼ 7¾	Feb. 1861
1024	North Wheal Busy (cop., &c.)	8 10 5	6⅛	5 5⅛	Feb. 1861
1122	North Wheal Crofty [S.E.]	8 19 8	9	7⅛ 8	Jan. 1861
4000	N. Wh. Exmouth (cop., lead)	2 2 6	18s.	17s. 19s.	Jan. 1861
2000	North Wheal Prospidnick	0 6 0	⅜		Nov. 1860
5000	N. Wh. Providence (tin, cop.)	0 8 6	1⅛		Nov. 1860
6144	N. Wh. Robert, Samp. Spiney	2 10 0	1	18s. 20s.	Aug. 1857
4108	North Wheal Trelawny (lead)	2 18 6	⅜		Jan. 1861
3000	North Wheal Trumpet	0 3 0	—		Sept. 1860
4000	N. Wrey (ld.), St. Ive [L. £2].	0 7 0	⅜		Jan. 1861
50000	Oakamoor and Stanton [L. £1]	0 5 0	⅜		Mar. 1859
4096	Okel Tor (lead), Calstock	5 1 6	2½		Sept. 1860
600	Old Tolgus United (cop.) Redr.	37 18 0	14	12 14	Jan. 1861
1024	Padstow Con. (sil.-ld., cop.)	0 7 6	1		Dec. 1859
800	Pant-y-Buarth (ld.) [L. £10].	5 0 0	20		Nov. 1860
200	Pant-y-Pwydu (ld.), Flintshire	10 0 0	20		Sept. 1860
8465	Pedn-an-drea United (tin)	3 0 0	⅜		June, 1860
5000	Pelyn Wood (cop.), Lostwithiel	2 5 0	⅛		Jan. 1861
5000	Pendeen Consols, St. Just	3 12 0	5¾	5 5⅛	Aug. 1860
1000	Pengenna (ld., sil.), St. Kew.	4 0 0	6¾		Jan. 1860
512	Penhaldarva (lead)	16 0 0	15		Oct. 1860
800	Penhale Moor (tin, copper)	3 0 0	6		Feb. 1861
5000	Penhalls (tin), St. Ann's	1 4 0	5		Jan. 1860
4800	Penhauger (lead), Menheniot.	0 7 6	⅛		Nov. 1860
6000	Penralt (lead), Merioneth	2 0 0	2¼		
2000	Pentre Lygan (ld.) [L. £2½].	1 0 0	1		Sept. 1859
6000	Penvivian, Lanivet, Cornwall	—	⅛		No call.
4000	Polgear Mines, Wendron	0 15 0	⅜		Feb. 1861
6000	Polhigey Moor (tin), Wendron	1 0 0	1¼		Jan. 1861
1024	Praed Consols (tin), Lelant	2 10 0	2½		Jan. 1861
6400	Prideaux Wood (tin, cop.)	3 10 0	16s.		Jan. 1861
512	Polbreen (tin), St. Agnes	8 0 0	12		Aug. 1860
6000	Prosper Uni. (tin, cp.), St. Hilary	1 0 0	1½	1¼ 1⅛	June, 1860
10000	Queen of Tamar, Beerfer. [L.]	1 0 0	1		Fully paid.
6000	Portlemouth Consols, Devon	0 6 3	—		Nov. 1860
12000	Redmoor (cop., tin), Callington	0 7 6	⅛		Feb. 1861
6000	Releath (tin, cop.), Crowan	1 0 0	2⅛		Oct. 1860
2500	Rhoswydol and Bacheiddon	12 0 0	7⅛		
15000	Ribden (lead), Alton [L. £1].	0 18 0	1⅛		July, 1860
10000	River Tamar Copper [L.]	0 10 0	⅛		Sept. 1858
6000	Rosewall Hill & Ransom Utd.	2 10 0	2½	1⅛ 2	No call.
4096	Rosewarne Consols (copper)	3 0 0	2		Feb. 1861
5000	Round Hill (cop., ld.), Salop	2 5 6	1¼		Mar. 1858
2000	Scorrier Con. (tin, cp.), St. Agnes	1 10 0	1⅛		Jan. 1861
10000	Sigford Con. (cop., tin) [L. £1]	0 11 0	1⅛		Dec. 1860
5000	Silver Bank (sil.-ld.) [L. £1].	0 5 0	1		Oct. 1859
15000	Silv. Vein, St. Winnow [L. £1]	0 5 0	1		April, 1860
100	Silver Rake (lead) [L. £20]	5 0 0	20		Jan. 1861
512	South Basset (cop.), Gwennap	11 0 8	17	17¼ 18½	Feb. 1861
100	South Bryn Gwiog	5 0 0	25		
6400	So. Buller & W. Penstruthal.	0 12 0	1¼	1¼	May, 1860
4096	S. Caradon Wh. Hooper (cop.)	2 0 6	⅜		Jan. 1861
6000	So. Carn Brea (cop.) [S.E.]	4 16 0	3⅛	3 3⅛	Jan. 1861
6138	S. Condurrow (tin, cp.), Camb.	1 14 0	¾	⅝ ¾	Nov. 1860
2283	Sou. Crenver (cop.), Crowan.	9 13 6	3¼		Oct. 1860
6000	South Darren (ld.) [L. £3⅛]	2 5 0	1¼		April, 1860
65000	S. Dev. Iron & Gen. Min. [L. £1] [S.E.]		⅞		Fully paid.
1024	South Ding Dong, Gulval	0 10 0	1		Aug. 1860
6000	S. Dolcoath & Carnarthen Con.	2 2 0	4		Feb. 1861
1024	South Garras, Kenwyn	7 17 10	4⅛		Jan. 1861
6000	South Gernick (tin), Crowan.	0 2 6	⅜		Oct. 1860
1000	South Gorland	6 0 0	6	5⅛	Aug. 1860
1024	So. Herodsfoot (ld.), Liskeard	1 2 6	1¾		Aug. 1859
6000	South Lady Bertha (copper)	0 19 6	⅜		Mar. 1861
5537	So. Phœnix (cop.) Linkin.	4 10 0	1¾		Jan. 1859
1024	South Treasvean, Gwennap	1 5 0	1⅛		Dec. 1860
25	S. Wendron Con. (tin), Wendron	25 0 0	—		No call.
4096	S. Wh. Betsy, Mary Tavy, Dv.	1 3 6	1		Feb. 1861
1105	So. Wh. Crofty (cop.), Illogan	2 8 10	4		Nov. 1860
1024	S. Wh. Ellen (cp.), St. Agnes	9 10 8	1		Nov. 1859
1024	S. Wh. Lovell (tin), Wendron	0 7 0	2½		Nov. 1860
400	So. Wh. Seton (cop.), Camborne	21 3 0	19	17 19	Dec. 1860
794	Spearne Cons. (tin), St. Just.	6 7 0	3¼		Mar. 1860
970	St. Aubyn and Grylls (cp., tin)	7 14 6	2½		Aug. 1860
5208	St. Austell Consols (tin, &c.)	3 16 0	1¼		Dec. 1858
1024	St. Ives Wheal Allen (tin)	4 10 0	5		Feb. 1861
1000	Stencoose and Mawla (tin, cp.)	1 10 0	1⅛		Jan. 1861
920	Stray Park (cop., tin) [S.E.].	24 8 0	41	36 38	Oct. 1860
5000	Tavy Con. (cop.), near Tavis.	5 10 0	1¼		Dec. 1860
3000	Tees Side (ld.), Cumberland.	3 18 0	9s.	7s. 9s.	Jan. 1861
6000	Tolcarne (cop.), Camborne	1 5 6	3		Jan. 1861
2000	Trefulack Uni. (tin), St. Enoder	1 10 0	1¾		Feb. 1860
6000	Tregardock (lead), St. Teath	0 12 0	1¼		April, 1860
2000	Tregullow Consols (tin, cop.)	0 5 0	1⅜		Nov. 1860
5000	Treloweth (copper), St. Erth.	5 18 8	3¾	3¾ 4	Dec. 1860
1024	Trencrom (tin), Uny Lelant	8 10 0	6		Nov. 1860
8000	Tretoil (copper, tin)	2 7 6	1⅛		Jan. 1861
5600	Trevenen and Tremenheere	5 9 0	2⅛		Feb. 1861
1024	Trevoole, Crowan, Cornwall	20 11 2	4⅛	6 6⅛	Mar. 1861
4096	Treweatha (sil.-ld.), Menhen.	4 6 0	⅞		Feb. 1861
2048	Treworlis, Wendron	1 10 0	2		Mar. 1859
4000	Trumpet Unit. (tin), Wendron	0 7 6	12s.		Jan. 1861
3000	Tyne Head (ld., cop.) [L. £1].	0 12 0	¾		Sept. 1860
1024	Tyringham Consols (tin)	1 10 0	2¾		Feb. 1860
5000	United Mines (cp., &c.), Tav.	4 7 6	¾		Dec. 1861
6000	Virtuous Lady (cop.), Tavist.	1 0 0	1⅛		Feb. 1860
1000	Waenlas (ld.), Denbigh. [L. £10]	8 0 0	5		Aug. 1859
3000	Watermouth Gt. Sil.-Lead [L.]	5 0 0	6		Fully paid.
4000	Wentnor [L. £2½]	1 5 0	1⅛		Nov. 1860
1024	W. Alfred (copper), Phillack.	36 16 5	13		Sept. 1859
100	W. Bryn Gwiog (ld.) [L. £20]	5 0 0	33	32 33	Jan. 1861
1218	W. Condurrow (tin, cop.), Cam.	3 7 2	2	2 2¼	Jan. 1861
16	West Denbigh (ld.), Denbigh.	35 0 0	50		Oct. 1860
30000	W. Devon Con. (cop.), [L. £1]	0 5 0	¼		July, 1859
4620	W. Great Work (tin), Germoe	0 6 6	—		Aug. 1860
25000	West Par Con. (cp.) St. Blazey	1 8 6	¼	4s. 5s.	Sept. 1860
6000	W. Polmear (tin, cp.), St. Austell	1 0 0	—		Sept. 1860
1600	W. Rose Down (cop.), Caradon	3 0 0	5¼	5¼ 6	Aug. 1860
256	West Sharp Tor (cop.) Rilliaton	126 0 0	25		Mar. 1861
5000	W. Snailbeach (lead) [L. £2]	1 0 0	1¼		July, 1860
4096	West South Caradon (copper).	1 12 0	2¼	2 2⅛	Nov. 1860
1056	West Stray Park (cop.), Camb.	7 2 6	6	4¾ 5	Oct. 1860
5000	West Tolcarne (cop.), Crowan	1 9 0	⅝		Jan. 1861
512	West Tolgus (cop.), Redruth	12 0 0	—		Jan. 1861
5120	West Tolvadden (cop., tin)	0 13 0	22s.		Dec. 1860
1879	West Trevelyan (tin, copper)	7 15 0	3⅛		Jan. 1861
4000	West Wendron (tin), Wendron	0 10 0	13s.		Dec. 1860
512	West Wheal Frances, Illogan	62 5 0	19		Jan. 1861
10000	West Wheal Jane (tin, &c.)	2 12 6	¾		Jan. 1859
1024	West Wheal Lovell, Wendron.	1 0 0	1		Oct. 1860
3000	W. Wh. Margaret (tin), Uny Lel.	2 5 0	⅞	¾ ⅞	Jan. 1861
6000	Wheal Agar (copper), Illogan	2 18 0	3¾		July, 1860
2048	Wh. Agnes (silv.-ld), St. Kew	—	1		No call.
1024	Wh. Anna (ld., blende), Perranz.	0 8 6	⅜		Feb. 1861
5000	Wheal Annie (cop.), Gwinear	0 15 0	¾		No call.
1000	Wheal Basset and Grylls (tin)	3 10 0	6⅛		Dec. 1860
3000	Wheal Conquer (tin, copper).	1 0 0	1⅛		Sept. 1860
6000	Wheal Crebor (cop.), Tavistock	0 13 6	¾	13s. 14s.	Feb. 1861
5120	Wheal Cupid (cop.), Redruth.	3 13 0	1⅛		Feb. 1861
512	Wh. Damsel (cp., tin), Gwennap	20 0 0	14		Feb. 1861
1024	Wheal Ellen, St. Agnes	6 9 6	1⅛		Jan. 1861
4000	Wh. Emma (cp) Buckfastleigh	2 12 6	1		Jan. 1860
4096	Wheal Emma (tin), Breage	0 10 0	¾		Aug. 1860
720	Wheal Franco, near Tavistock	22 10 0	5⅛		Sept. 1859
6000	Wh. Grenville (copper) [S.E.]	6 16 0	3	2¾ 3	Feb. 1861
5120	Wheal Harriett, Camborne	4 0 0	39s.		Sept. 1860
6000	Wh. Harris (ld., cop.), Lifton	0 10 6	⅞	¾ ⅞	Feb. 1861
1024	Wheal Hearle, St. Just	7 10 0	15	12¼ 13⅛	Sept. 1860
1000	Wheal Hender (cop.), Crowan	3 19 0	1⅛		Aug. 1859
6000	Wh. Henry, Helvn. (lead) [L.]	1 0 0	1		Fully paid.
512	Wheal Hendra (tin), Breage	1 2 6	1¼	1¾ 2⅛	Jan. 1861
10000	Wh. Lopes (tin, zinc) [L. £1].	0 10 0	—		Feb. 1860
100	Wheal Louisa (cop.), Redruth.	10 0 0	120		No call.
5640	Wh. Mary Emma (tin) Lydford	0 9 6	—		Jan. 1861
6000	Wheal Moyle, Gwennap	2 0 0	1⅝		Aug. 1860
5000	Wh. Nelson (tin, cop.), Camb.	1 13 6	1		Nov. 1860
6000	Wh. Norris (tin, cp.), St. Cleer	0 17 4	1¼	22s. 24s.	Feb. 1861
256	Wheal Polmear, St. Austell	17 10 0	160	170 180	
2315	Wh. Pollard (cop.), St. Neot's	2 0 0	⅛		Jan. 1861
1000	Wh. Prosper (cp., tin), Breage	6 0 0	3		Dec. 1860
1879	Wheal Prospidnick	1 11 0	5¼		Feb. 1861
240	Wh. Reeth (tin), Uny Lelant	57 10 0	60	55 59	Jan. 1861
600	Wheal Rose (ld.), St. Columb	1 10 0	6		Dec. 1860
1024	Wh. Sicily (sil.-ld.), Broadoak	2 0 0	3		Nov. 1860
4096	Wheal Sidney (tin), Plympton	3 4 1	1		Jan. 1861
2048	Wh. Sithney & Carnmeal Uni.	3 10 0	3		Oct. 1860
1024	Wheal St. Andrew (copper)	5 0 0	5		Jan. 1860
6000	Wheal Tehidy (cop.), Illogan	5 5 0	½		Dec. 1860
512	Wheal Trannack, Sithney	1 10 0	—		Nov. 1860
512	Wh. Trefusis (cop.) Gwennap.	26 5 0	3		Aug. 1859
6000	Wheal Trevelyan (tin, copper)	1 9 8	1¼		Feb. 1861
6000	Wheal Union (cop.), Redruth	2 16 0	2⅝		Aug. 1860
6000	Wh. Unity (cop., tin), Gwinear	10 10 0	13s.	11s. 13s.	Feb. 1861
4096	Wh. Uny (tin, cop.), Redruth	7 16 6	4	3⅛ 4	Nov. 1860
1024	Wheal Vyvyan (copper)	0 10 0	—		Dec. 1860
6000	Wheal Welcome (tin, copper).	1 0 0	4½		April, 1859
6400	Whitford (lead), Holywell	10 16 6	—		May, 1860
5000	Willow Bank (lead) [L.]	2 2 6	4s.		Nov. 1860
1024	Worvas Downs (tin), Lelant.	2 0 0	3⅛		Dec. 1860
4096	Wrey Consols, Buckfastleigh.	0 8 0	¾		Dec. 1860
3170	Yarner (copper), Devon	2 5 0	2		Aug. 1860

*** Those mines with [S. E.] appended have been admitted on the Stock Exchange. Those mines with [L.] appended have been incorporated with Limited Liability.

*** Our object being to make the Share List correct, we earnestly call upon all who have the power, to aid us, by forwarding any alterations or corrections which may, from time to time, come under their notice. To shareholders, as well as those officially connected with the mines, we appeal for information. Reports from mines—in fact, mining intelligence of every description, forwarded to our offices, will meet ready attention.

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